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Ballmer Bot upstages Gates at TechEd

Outgoing Microsoft chairman delivers farewell speech

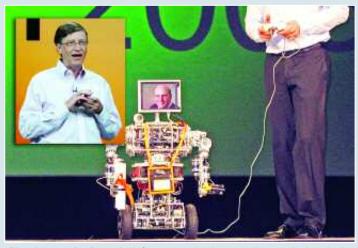
BY DAVID WORTHINGTON

ORLANDO, Fla. — It was Bill Gates' last keynote as chairman of Microsoft, but that wasn't at all obvious: He stayed on message to the end, though a joke at the expense of company CEO Steve Ballmer did elicit a grin from behind the tycoon's legendary shell.

JUNE 15, 2008 • ISSUE NO. 200

Ballmer Bot, a robot built by University of Massachusetts Amherst students using the Microsoft Robotics Toolkit, also made a cameo on stage, drawing a wide smile from Gates, who is stepping down as chairman at the end of the month.

In his farewell address June 3, Bill Gates looked at the future as well as the past, announcing a Go Live edition of Silverlight 2, a new data caching technology and



Bill Gates remains in control, for now, as he demos Ballmer Bot at TechEd.

a partnership with IBM. The audience at the TechEd Developers conference responded with muted applause but was otherwise silent.

Silverlight 2 beta 2 was released with a Go Live license—permitting customers to use the prerelease software in production—shortly after the keynote had ended. The second beta of the Silverlight 2 tools for Visual Studio 2008 was released at the same time.

The beta's feature set is complete, said Jonathan Perera, general manager of Microsoft's Application Platform division, in an interview with SD Times. However, he could not confirm whether Microsoft had addressed developers' complaints by expanding its isolated storage or by adding support for using HTML and Silverlight within the same application.

In addition, Gates announced several data-oriented products: the first Community Technology Preview (CTP) of Velocity, a distributed in-memory application cache platform, and a CTP of the

continued on page 3 ▶



Richer apps = greater revenue, explains Google VP Vic Gundotra.

GOOGLE'S 'GET RICH' STRATEGY KEEPS GROWING

BY ROBERT MULLINS

Sometimes, Google is bigger than even Google realizes.

As in 2004, when it conservatively priced its initial public offering at US\$28 a share, and is now nearing \$600, the company may underestimate the outside's interest in its doings. More recently, Google initially limited signups for its App Engine development platform to 10,000, then saw its waiting list swell to 150,000. And late last month, 3,000 people showed up at the Google I/O developer conference when the company expected only 2,000, leaving hundreds in line and forcing organizers to let people in without registering so they wouldn't miss the keynotes.

"Google quietly changed everything," writes Silicon Valley journalist Sarah Lacy in her new continued on page 22 ▶

Adobe gets Flash-y in Acrobat 9

BY ROBERT MULLINS

For the first time, Acrobat will offer native support for Flash technology, when Adobe Systems releases Acrobat 9 next month.

The software also will include PDF Portfolios, which brings together a variety of content sources—video, photos, calendars, text, 3D images and spreadsheets—into a compressed PDF file that people working on a project can share.

PDF Portfolios relieves the "pain in the neck" of having to juggle disparate documents and file types in a project, said Mari-

on Melani, group product marketing manager for Adobe.

"You can attach one PDF file to an e-mail, and once you open that PDF, all the various content types, documents or images, or video ... can be contained within that one PDF Portfolio document," Melani said.

The company plans three versions of Acrobat 9, with prices ranging from US\$299 for the standard edition up to \$699 for the ProExtended version. The latter supports more extensive document validation against ISO standards, addition of audio and

video documents, and interoperability with computer-aided design software.

Adobe will also launch Acrobat.com, a free site that lets collaborators in different locations change a document in real time. A beta version of the site is currently operational.

Acrobat.com users will be able to view presentations on the site from within the free Adobe Reader. "For people who consume that content, all it requires is Reader," said Michael Folkers, a product manager at Adobe. "It doesn't continued on page 10 >



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No sweeping changes expected in Windows 7

BY DAVID WORTHINGTON

The Windows 7 marketing blitz has begun. Breaking their silence, Microsoft officials have revealed that there will be minimal deviation from the application compatibility, kernel and hardware requirements of Vista.

Outgoing chairman Bill Gates even showed off an early version of Windows 7—focusing on its touch-screen capabilities—on May 27 at The Wall Street Journal's D: All Things Digital conference in Carlsbad, Calif., during an interview session with CEO Steve Ballmer.

Applications and devices

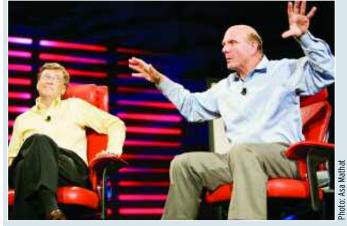
that work with Vista are generally expected to work with Windows 7, Chris Flores, a director at Microsoft's Windows Client Communications Team, noted the same day in the Windows Vista Team Blog (windowsvistablog.com).

"Contrary to some speculation, Microsoft is not creating a new kernel for Windows 7," he wrote. "Rather, we are refining the kernel architecture and componentization model introduced in Windows Vista. While these changes will increase our engineering agility, they will not impact the user experience or

reduce application or hardware compatibility."

Even though it is slated for release in 2010, Windows 7 will run on the same recommended hardware as is specified for Vista, Flores said.

Microsoft's decision to refine rather than rebuild the underpinnings of Windows marks an about-face. In October, Microsoft distinguished engineer Eric Traut discussed "MinWin," a project to address Windows' dependence on legacy DLLs and libraries when executing older applications, during a talk at the University of Illinois. Traut



Bill Gates, Steve Ballmer and Windows 7 all appeared at digital conference.

said that MinWin, a strippeddown version of the Windows kernel with other core components, would be the foundation of Windows 7 and other releases of Windows going forward.

However, after months of anticipating big changes for

Windows, Steven Sinofsky, senior vice president of the Windows and Windows Live Engineering Group at Microsoft, said that MinWin would not be a part of Windows 7 after all, during a Q&A with News.com published May 27.

GATES GIVES TECHED FAREWELL

continued from page 1
 Microsoft Sync Framework for Windows Mobile.

Velocity brings caching to the masses by leveraging skill sets and represents Microsoft's baseline approach to working with event- and session-based data in ASP.NET, IIS and the .NET Framework, Perera said.

What's more, the company is working with IBM to allow Visual Studio Team System Database Edition to work with DB2 databases. IBM is building a database schema provider for Visual Studio 2008 and will release a CTP this year, said Perera.

On another front, Microsoft remained tight-lipped about Oslo, the company's foray into model-driven development that will be a multiyear, multiproduct effort to develop composite application technology.

Gates said that the Oslo project has ongoing movement,



Perera didn't say if Silverlight 2, beta 2, addressed concerns.

noting it will include visual modeling and composition tools; a foundational repository for managing application metadata; and a new, declarative modeling language, called "Microsoft D," to enable domain-specific modeling notations and interoperability of models between tools.

Gates, in his speech, noted that Microsoft would release CTPs of Oslo components at Microsoft's Professional Developers Conference in October.

In this milestone speech, Gates was joined on stage by other Microsoft executives, including technical fellows David Campbell and Brian Harry and senior vice president S. Somasegar. Gates reflected on how software development has evolved during his 33-year tenure at the helm of Microsoft, and he outlined the road ahead.

Gates also hearkened back to his days as a software developer—a pursuit that he says remains close to his heart and guides his decisions as he lays out a new path for Windows and .NET developers to follow.

"When I think back on the early days of development when we were all programming in DOS, and then take a look at what we can do now with technologies like the .NET Framework, it simply amazes me how far we've come," Gates said.

At the keynote's conclusion, the crowd applauded politely as Gates walked off the stage without ceremony.

Free grid control aims at Silverlight

BY DAVID WORTHINGTON

Anticipating a summer release of Microsoft Silverlight 2, a component maker aims to demonstrate that Silverlight is a precocious platform for developers.

Developer Express announced a preview of its DX Grid control for Silverlight 2 on May 27. The control was expected to be released on June 3 to coincide with Microsoft's TechEd 2008 developer's conference and is available free.

"We want to get our name out to show we do advanced controls for Silverlight," said DevExpress CTO Julian Bucknall. "We want to make a splash at TechEd."

DevExpress's release of DX Grid coincides with Microsoft's delivery of the second beta of Silverlight 2, also on June 3. The Silverlight 2 control is based on DevExpress's grid control for Windows Presentation Foundation (WPF) and reuses WPF code, said Bucknall. Its full feature set is detailed on the DevExpress Web site, and it provides functionality akin to its WPF counterpart.

Silverlight 2, due in August, includes a subset of the .NET Framework's Common Language Runtime called Core-CLR. It will offer cross-domain network access and a WPF-derived UI framework, with .NET base class library support.

Silverlight 2 lacks advanced WPF capabilities such as 3D graphics and native Panels, a category of elements used in WPF to arrange a collection of child elements (known as UIElements) into their proper sizes and positions for layout.

DevExpress has filled the gap, Bucknall said, by already having written its own panels and lower-level infrastructure code for WPF, which it was able to recast easily for Silverlight.

In addition, Silverlight 2 will ship with two dozen or more UI controls, a factor that may have influenced DevExpress's licensing scheme.

"Silverlight has a data grid that is fairly usable; I won't deny it," Bucknall said.

He explained that DevExpress will try to differentiate itself from Microsoft's stock control by emphasizing the "big differences," such as how DX Grid is designed to work with large data sets and provides analysis options to filter, group and sort records.

TechExcel adds requirements to DevSuite

BY P.J. CONNOLLY

It's difficult to claim leadership among providers of application life-cycle management tools when one's flagship product lacked the ability to track the requirements for the software, but TechExcel has fixed that.

The company has released the latest version of DevSuite, with the DevSpec requirements management tool joining the lineup of ALM tools that already included DevPlan for project planning; DevTest for Q/A and regression testing; DevTrack for issue tracking; and KnowledgeWise, a centralized repository with knowledge management capabilities.

DevSpec "is the final piece of the puzzle," making DevSuite 7.0 "the first truly scalable and agile implementation platform," said TechExcel CEO and founder Tieren Zhou. By embracing agile methods, he added, customers, developers and other interested parties can introduce software requirements earlier in the development cycle, "when they're needed most." DevSpec does more than list the current set of requirements; it can manage versions of requirements, because requirements can go through several iterations.

DevSuite 7.0 also offers a library of preconfigured solution guides for a range of software development methodologies, including Capability Maturity Model Integration, as well as feature-driven development, iterative development, Scrum and SpecDD, or specification-driven development.



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Business analysts struggle to reinvent role

Meld strategic outlook, broader business and tech expertise

BY JENNIFER DEJONG

Of all the roles associated with developing software, perhaps none needs a makeover as badly as the business analyst. Intended as a pivotal position that translates business needs to software requirements, the role varies widely across organizations.

Often saddled with negative stereotypes, the job doesn't command the respect it deserves. "It's the guy in IT who can't program, who sits and shuffles the requirements," said Gartner analyst Jim Duggan. Or it's "the guy in business who couldn't quite make it in business," added Mitch Bishop, chief marketing officer for iRise, which sells software to visualize applications before they are built. Traditionally, the job has been seen as "something you fall into, versus something you really want to do," he said.

Now, however, a host of factors is coming together to change that. As a result, the analyst is playing a more strategic role, one leading the effort of "producing the software the business needs," said one analyst, Voke founder Theresa Lanowitz. To bring the profession the uniformity it has

lacked, a not-for-profit association called the International Institute of Business Analysis (IIBA) has articulated a set of best practices for analysts and is expected to publish version 2.0 of such practices in September (see story below).

In addition, the IIBA runs a program to certify candidates who demonstrate expertise in business analysis. Other signs of growing activity around the profession include the launch earlier this year of Requirements.net, an industry consortium for business analysis, and the growth of an emerging category of tools designed to help elicit and define requirements, not just manage them as part of the development life cycle.

Such efforts may help legitimize business analysis as a profession. But whether they will actually help companies develop and hire more effective business analysts—enabling them to produce software that helps the business succeed—remains to be seen. That's largely because the new definition of analyst requires more business knowledge and technology expertise than most business analysts possess,

according to experts interviewed by SD Times. And the job also requires, as it always has, soft skills. Those include the ability to elicit information effectively and facilitate discussions between parties who disagree.

THE NEW-STYLE ANALYST

The new analyst "is a person who can do everything," said Microsoft director of marketing for Visual Studio Team System Norm Guadagno.

Chief among those skills is the ability to think strategically, instead of simply translating business needs to technical requirements. "BAs have traditionally been task-oriented, but business analysis is about the big picture," said IIBA president Kathleen Barret. "The new business analyst is more strategic, and those who [remain focused on only the] tactical aspects aren't qualified."

The business analyst has long bridged business and IT, and the newly defined role raises the bar, demanding a deeper understanding of both, said Forrester analyst Carey Schwaber, author of the April report titled, "The New Business Analyst." For

THEY COME FROM TWO CAMPS

Most analysts are experts in one line of business or in IT. But Forrester predicts that a new breed with a deep knowledge of both will emerge.

Business-oriented business analysts

- Cross-functional
- Functional
- FinancialHuman resources
- Marketing
- Other functions: sales, operations, etc.

IT-oriented business analysts

- Generalist
- Information
- ProcessExperience

Source: Forrester Research

example, such a person must understand the real return-oninvestment for a project, she said. That requires the ability to draw meaningful conclusions from financial data. Also crucial is working with sophisticated tools, like business process management software and business rules engines, which let users input crucial data about business activities without IT's help.

"It's more technical than what most analysts do today, and it's also more business-oriented," she said of the new definition of business analyst.

One obstacle that can emerge early in the analysis process is gaining access to high-level business information. The new type of analyst needs to know, for example, whether a company plans to grow by acquisition, said IBM director of offerings management Ashok Reddy. "Who owns the business decisions about the company? What are the priorities?" Traditionally, business analysts haven't been privy to such information, he said. Instead, they are granted access only to "low-level people, lowlevel documents."

How does a professional pursuing the path of new-style business analysis gain access to the big-picture plans? In a sense, you have to talk your way in, said Microsoft's Guadagno. "The analyst needs to articulate clear, concise arguments to business on what IT can do." That's difficult but not impossible, he said. "The business has high expectations from [technology]." Tapping into those expectations and taking a leadership role can open the door, he said.

Successful analysts also need soft skills, such as the ability to elicit crucial information that helps define application requirements and to facilitate difficult discussions, said the IIBA's Barret. "These are the traits that make for a good business analyst."

Those are much the same skills required of product managers, who have long served as the bridge between engineering and marketing, said Voke's Lanowitz. "The business analyst title sticks, but the roles and responsibilities are those of a product manager."

CALL IT WHAT YOU WILL

These days, business analysts go by a host of titles, including systems analyst, business architect, project manager or simply "analyst," experts said. But, basically, professionals practicing today come from one of two camps: analysts originating from the business side and those from IT, said Forrester's Schwaber (see above).

"Business experts typically have deep knowledge around one particular business process and application, such as enterprise resource planning," noted Compuware product manager continued on page 6 >

Schwaber: Analysts must be conversant in ROI and software.

BABOK: A BODY OF KNOWLEDGE FOR ANALYSTS

A set of standard practices used by business analysts, Business Analysis Body of Knowledge (BABOK) was developed by the International Institute of Business Analysis (IIBA), a nonprofit professional association founded in 2004. Neither a methodology nor a how-to manual, BABOK spells out the types of activities in which business analysts engage to execute their jobs. In September, the IIBA plans to release BABOK 2.0. Unlike the previous version, 1.6, the forthcoming version is less IT-focused and doesn't cite specific technologies, such as the Unified Modeling Language, for various phases of business analysis, said IIBA president Kathleen Barret. Six practice areas comprise BABOK 2.0, which Barret described:

Enterprise Analysis. This is about understanding the big picture for application development projects. Key activities include defining project goals, establishing measurement criteria and developing business cases and feasibility studies.

Business Analysis Planning. The focus is on things that need to get done. How does the work break down? Who are the key stakeholders? With whom will you speak? About what, and when?

Requirements Management. Conflicts, issues and changes are managed to ensure stakeholders remain in sync on the scope of the project. A key piece is continual feedback on work sessions, for example

Requirements Analysis. This is a science. You sort the information that has been elicited, classify it, structure it and model it—using the tools of your choice.

Elicitation. This is essentially an art that employs different techniques to draw out information on what the application needs to do. Brainstorming-essentially a group session at which members are asked, "What would you want if you could have everything?"—is just one example. Other elicitation techniques would include customer surveys, interviews with executives and formal requirements sessions, where stakeholders might map out the process for capturing customer information. A critical piece is making sure that a wide range of people, all with different interests in the application, is represented.

Solution Assessment and Validation. The focus is on understanding the impact of the project on the organization by conducting, for instance, user assessment testing. BAs typically play a supporting role. ■ —Jennifer deJong

HP tackles biggest risks in app security for SaaS

Hewlett-Packard's acquisition last year of application security specialist SPI Dynamics is bearing new fruit, as well as a service-based offering that will debut this summer.

The company last month announced three major updates to the HP Application Security Center, based on SPI's former product line. They are designed to help organizations prevent, detect and repair security vulnerabilities in their Web applications. All are available now.

The idea, company officials noted, is to help developers assume their fair share of the responsibility. One study released in May from research firm Vanson Bourne indicates that as many as 80% of organizations task security and operations teams with remediation of application vulnerabilities; less than 27% saddle development or QA teams with some portion of the work.

The Assessment Management Platform remains the foundation of the HP security center in this release, with DevInspect picking up the ability to work with Microsoft's latest IDE release and Visual Studio 2008. It also allows updated

hybrid analysis that the company claims leads to a "clear path" for developers who are rooting out faults, by focusing on the highest-risk and most commonly found scenarios.

QAInspect integrates its defect management features, including defect staging, highlighting and consolidation, with the tools of HP Quality Center. Meanwhile, WebInspect now offers faster runtimes, according to company officials, who added that the focus here is also on the most frequently used attack vectors, including cross-site scripting and SQL injection.

HP, recognizing that some organizations might not wish to maintain all of the technology of a complex vulnerability detection platform, also announced on May 27 that it expected to make the Assessment Management Platform available through its HP SaaS services organization in August.

"Now customers can get up and running quickly and involve all the right teams to minimize this risk," said HP Software's vice president of products, Jonathan Rende, in the company's announcement. ■

PICKING YOUR TEAM

Sherry Preston knows a thing or two about what it takes to be a good business analyst. Last year, she hired 11 of them, expanding her team to 15. "We wanted clinical people with an IT interest," said the manager of electronic medical records for The University of Texas M.D. Anderson Cancer Center in Houston.

Preston spearheads development of the center's records application, which was developed in-house. Used by doctors, nurses, medical technicians, and other caregivers and administrators, the system is central to how the center delivers care to the 79,000 cancer patients it expects to treat this year.

"People applied from oil and gas and from banking," she said of the 11 analyst openings. "They were well established and impressive but had no clinical experience."

Instead, Preston built her team by hiring nurses, medical technicians and professionals who had transcribed medical records. "We needed people who could elicit, analyze and do document requirements," she said. So Preston sought "left-brained thinkers," who are verbal and adept at processing information sequentially.

"We figured we could teach them how to write use cases, how to work UML tools," she said, referring to the Unified Modeling Language. What about the challenge of getting the team up to speed on the technical stuff? "It's going better than I anticipated. The group is doing well." Preston said.

—Jennifer deJona

ANALYSTS MUST MELD BUSINESS, IT EXPERTISE

Mark Eshelby. But they often lack broader knowledge about the business in general or about business processes outside their domain, he added. They are experts at optimizing a single function, like sales, marketing, human resources or operations, agreed Schwaber.

"IT analysts are generalists," Schwaber said. They rely heavily on subject matter experts to help them understand the business needs, said Matt Morgan, chief marketing officer for BluePrint, which sells software to help analysts elicit and define requirements. "[The IT] BA shows up at the meeting and says: 'I'm confused. Help me with the quote-to-cash process,' and subject matter experts provide the information."

Eventually, the two breeds could be replaced by the newly evolved business analyst, armed with a deep knowledge of the business and IT, said Schwaber. But that is a tall order, and the coming year will bring a lot of experimentation around the role, she said. The title "business analyst" doesn't do justice to the skills required. "It doesn't say enough about how challenging the role really is." A more apt title would be "business technology analyst," she said. ■



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Yahoo hopes application writers go ape over tools

BY ROBERT MULLINS

Yahoo may be facing questions of ownership, but that doesn't mean the company's workers are monkeying around.

Yahoo launched SearchMonkey on May 15 at a party in its offices in Sunnyvale, Calif. It is the company's latest attempt to drive traffic to its search engine by providing free development tools for Web 2.0 applications.

SearchMonkey, introduced at April's Web 2.0 Expo in San Francisco, invites developers to visit the Yahoo Developer Network site and use its tools to create applications that would pull structured data from a site to display in the search results.

During a kickoff event for about 300 Yahoo employees and outside developers, Yahoo developer Paul Tarjan demonstrated SearchMonkey. Using the example of a restaurant, Tarjan noted that in typical search results, there are a number of links related to those results, and a few lines of text after each link, that appear on the results page. In contrast, he showed how a SearchMonkey

application could pull information from the restaurant Web site such as a photo of the restaurant or a featured dish, as well as the address and the phone number, and add them to the search results. The application could also be written to simultaneously pull data from Yelp.com, a userbased ratings site, with that restaurant's star rating.

"These applications are smart enough to understand where the structured data exists on the Web site and be able to pull it up quickly in the search results," said Amit Kumar, director of product management for Yahoo Web Search.

SearchMonkey applications can be written in PHP, sometimes with help from XSLT (Extensible Stylesheet Language Transformations), and are hosted free on Yahoo's servers, said Kumar. Also, developers can host a SearchMonkey application on their own site and use a wrapper to have it run on Yahoo Search.

HowStuffWorks.com is already using SearchMonkey to enhance its presence in Yahoo's



Jason Hoch (center) of HowStuffWorks.com demos search results apps developed using SearchMonkey at last month's launch party.

search results, said Jason Hoch, vice president of product management. HowStuffWorks is an online encyclopedia, containing articles on science, automobiles, food, computers and just about everything else (one recent topic: "How Barack Obama Works"). The site is a wholly owned subsidiary of Discovery Communications, parent of the Discovery Channel and other cable TV networks. With $Search Monkey,\ How Stuff Works$ incorporate Discovery

Channel's video content into the results of a search, said Hoch.

"We write well, we do content well, we do video well and now we can bring in that video to search," Hoch explained.

Yahoo has struggled recently to stay competitive with search leader Google while fending off a takeover bid from Microsoft. Although Microsoft dropped its plans to acquire Yahoo on May 3, billionaire investor Carl Icahn launched his own campaign to replace Yahoo's board

in an effort to get the company to sell itself to Microsoft.

Yahoo Search lost ground to Google again in April, according to search rankings released by Nielsen Online on May 19. Google's share of the online search market in the U.S. rose to 62%, compared with Yahoo's distant No. 2 share of 17.5%. The total number of searches that used Google hit 5.1 billion in April, up 35.4% from April 2007, while Yahoo Search fell 3.4% in the same period, to 1.4 billion.

SearchMonkey could improve Yahoo's search traffic if it makes it more compelling for users, said Jon Stewart, research director for Nielsen Online.

"All search engines have to innovate because relevance is king," said Stewart. "It's a matter of the search engines' capitalizing on building the best mousetrap."

Google laid a mousetrap that it calls universal search one year ago, Stewart explained, which brings together related videos, images, maps and Web sites

continued on page 14 ▶

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Earlier governance at core of Repository Manager 6.0

BY DAVID WORTHINGTON

A maker of automated SOA governance tools has updated its product to address what it views as the growing requirement for earlier governance of software assets in the SOA life cycle.

On June 2, SOA Software's Repository Manager 6.0 became generally available. The update has facilities for governing and managing services as they progress from the start of the service life cycle, designing gov-

ernance processes, and now providing federation with more third-party UDDI registries.

To implement governance as early as possible in the service life cycle, Repository Manager now integrates with SOA Software's Policy Manager (formerly Workbench) to provision service and schema definitions that are under development.

The repository tools now ship with an Eclipse plug-in named Configuration Designer. The plug-in permits users to graphically design governance processes for deployment to Repository Manager installations.

Configuration Designer is a single point of control from which users can govern and manage services as they progress from development to deployment. Users can also provide feedback at critical checkpoints in the life cycle, said Brent Carlson, senior vice president of technology at SOA Software.

Interoperability with other SOA infrastructure software has been extended. Repository Manager's Asset Import Manager supports discovery and synchronization with IBM's WSRR and UDDI registries, as well as HP's SOA Systinet.

Additionally, it automatically populates Web service documents and metadata to Tibco's Active Matrix Registry.

"The overarching theme [of this release] is end-to-end governance. It provides a coherent, consistent governance process model that federates across platforms," said Carlson.



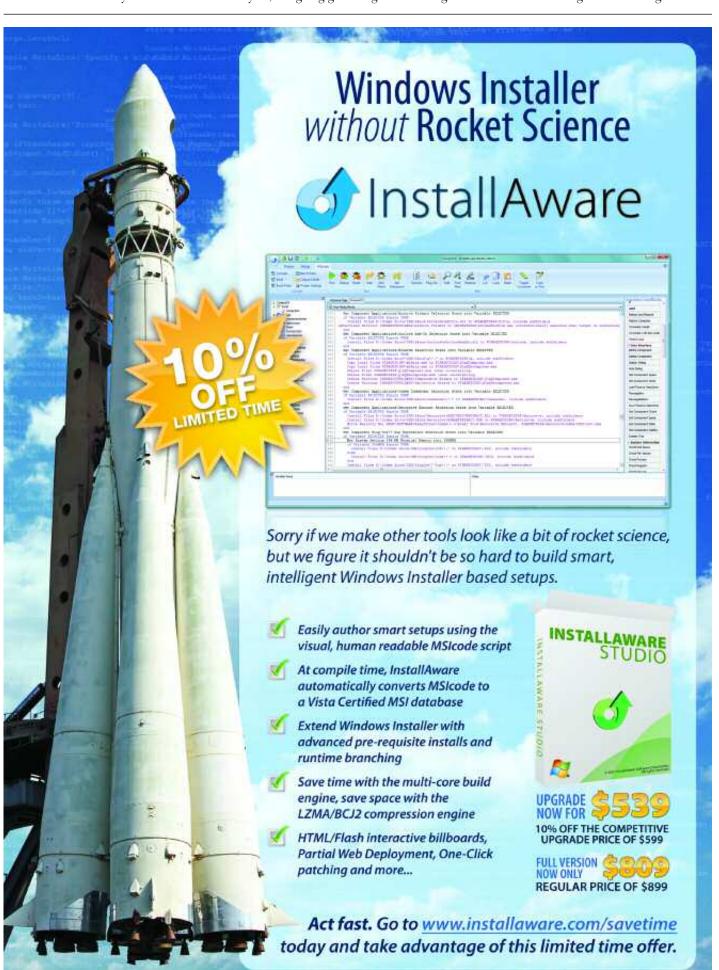
continued from page 1
 require any external player application [to view any] video, 3-D content and interactive Flash content. It really only requires Reader to consume."

Acrobat.com also gives users free access to Buzzword, an online collaborative word processor, and ConnectNow, a service for hosting meetings, said Rick Treitman, entrepreneur-in-residence at Adobe. Treitman is also a former CEO of Virtual Ubiquity, which Adobe acquired in December 2007, primarily for its Buzzword offering.

COLLABORATE ON SCREEN

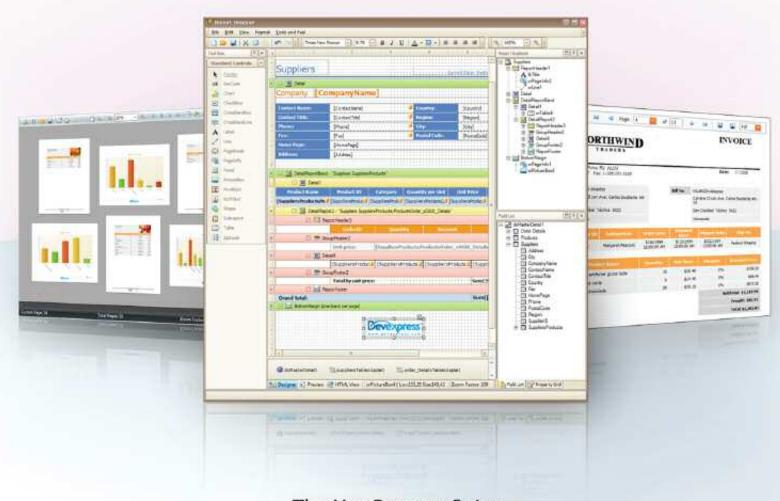
As many as three people can host an online meeting free on ConnectNow, where they can share screens and a virtual whiteboard while uploading and downloading files and viewing one another on Webcams, Treitman said.

An Acrobat 9 SDK will be released by year's end, though a beta version is already being shared with Adobe partners, Folkers said. ■



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Office 2007 won't support ISO's OOXML document format

BY DAVID WORTHINGTON

For customers expecting an ISO-conformant Office Open XML (OOXML) in Microsoft Office, the wait will continue: Microsoft will not implement the standardized version of its own document format until Office 14 ships. Meanwhile, a service pack due in 2009 is expected to expand the formats supported by Office

On May 23, Microsoft said it was making new commitments to document interoperability within its Office product line for Windows. Office 2007 Service Pack 2 will add native support for OpenDocument Format (ODF) 1.1, PDF 1.5, PDF/A and XML Paper Specification, an XML-based fixed-document format created by Microsoft.

Microsoft did not say in the announcement whether the Macintosh editions of Office would support any additional document formats. Office 2004 for Mac still lacks a full implementation of the Ecma

376 version of OOXML that Microsoft introduced with Office 2007.

In a surprise move, the company also announced that it intends to participate in the OASIS ODF working group and the corresponding ISO/ IEC Joint Technical Committee 1 Subcommittee 34 working groups for ODF, as well as the ISO Technical Committee 171 working group for PDF, said Doug Mahugh, senior product manager for Microsoft

He added that Microsoft would also introduce an API to let developers plug their own converters for formats, such as ODF, into Office to make it the default conversion path. ODF 1.1 was chosen over the ISOstandard ODF 1.0 as a practical decision based on interoperability with existing implementations, Mahugh explained.

"It's the de facto version," said Jason Matusow, senior director of interoperability at Microsoft. "We have to look at the development investments

companies are making."

Members of Microsoft's Vendor Alliance, including Linspire, Novell, Turbolinux and Xandros, are working with Microsoft on document interoperability, and Microsoft sponsors a SourceForge project to the same end.

"Interoperability and integration are two of the most crucial components for any organization's infrastructure," said Yankee Group research fellow Laura DiDio. She added that between 60% and 70% of Microsoft's customers use open-source software and that at least half employ productivity software that saves documents in the ODF format.

'It should be all about the users," DiDio said. "A significant constituency of end users would need and want this support. Not having it [ODF support] adds to the perception Microsoft still remains closed."

But DiDio did not put the onus on Microsoft alone. She said she believes that the opensource community is also

Matusow: Look at companies' development investments.

obliged to support Microsoft.

As for Microsoft, the company is not quick to embrace its own creation. Mahugh said that the company would not implement the final ISO version of OOXML until Office 14 ships. This variant of OOXML was designated ISO/IEC 29500 at the time it was certified as an ISO International standard in April.

"One way to look at it is the prioritization of formats," explained Mahugh . "We reach a point in time where we have to decide whether to continue to invest in a previous version [of Office] or to cut the cord and move forward."

ODF support was a priority for Microsoft, Mahugh noted, adding that "real world" customers say that there is a pressing need for PDF support. "At this point, there are no products using [ISO/IEC 29500] in the marketplace."

Microsoft has yet to publicly discuss a timeline for Office 14, but one analyst believes that it can't come too soon.

"Customers that are expecting true document fidelity from XML-based, ISO-standard document formats will continue to be disappointed," said Michael Silver, a Gartner Research vice president.

Silver observed that the most compatible formats to use today are Microsoft's legacy binaries, and he thinks that Microsoft will be unlikely to persuade customers to move to OOXML in the foreseeable future.

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14 NEWS Software Development Times June 15, 2008

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Unit testing never took off, CEO laments

BY DAVID WORTHINGTON

Unit testing was the wrong horse to back, says the former CEO of a software test toolmaker that bet on a trend that failed to materialize.

Jerry Rudisin, CEO of Agi-

tar Software until April, said of unit testing: "The practice works, but it hasn't taken off as a mainstream practice. The founders [Roongko Doong and Alberto Savoia] made a sensible bet on [unit testing], but it did not pan out. We gave it our all."

Agitar is best known for its AgitarOne Java unit testing suite and AgitarOne Agitator testing technology, which was designed to automatically generate test cases and analyze the results. The company ceased operations this spring, and most of the staff was terminated.

The founders' intention was to "do for software development what Google has done for Web services," by building a vast community of users and exploiting it through data mining, Rudisin said. But the community never reached critical mass.

Consequently, Agitar's management decided in March not to pursue additional venture financing, which prompted the board to wind down the company's operations, he explained.

WORK OUT THE DEBT Then, Agitar retained

Then, Agitar retained the services of Sherwood Partners LLC to renegotiate the company's debt. Sherwood mailed a notice of assignment to Agitar's creditors on April 28. Sherwood also hired back some core employees to keep deals moving forward, Rudisin said.

But that might be too little, too late for Agitar to salvage its customers. Competitors, including Instantiations and Parasoft, are fishing for customers, baiting the hook with incentives for moving to their unit testing tools.

For now, former Agitar customers can exchange a license of AgitarOne for a comparable Instantiations CodePro AnalytiX license for the cost of CodePro's annual maintenance. Likewise, Parasoft has launched the "Agitar Amnesty Program," encouraging ex-Agitar customers to trade in their license for the Parasoft Application Quality Solution for the maintenance fee. •



◄ continued from page 8 into search results.

Although Google's market share is 3.5 times larger than Yahoo's, Yahoo still has a chance, he claimed. Sixty percent of search engine users search on more than one site. Of those, 24% alternate between Google and Yahoo. Those users could find SearchMonkey applications a reason to use Yahoo more and Google less, Stewart said.

SearchMonkey was created independent of the recent takeover battle with Microsoft, said Kumar, but added the initiative would help to enhance the Yahoo brand.

"We have been very careful to make this an open platform and a free platform, because the way we're going to make money out of this is to create a more productive experience for our users, and our hope is that they will flock to Yahoo Search," Kumar explained. ■



Skytap tests 'virtual lab' service

BY DAVID WORTHINGTON

A startup has taken virtualization up "into the cloud" in hopes of creating a virtual lab management infrastructure that would appeal to QA test teams.

Skytap Inc. now has limited availability of its Skytap Virtual Lab service. Virtual Lab provides preconfigured virtual machines for various Linux, Solaris and Windows environments that are accessible via Internet Explorer and Firefox.

Services will be priced like a utility—on a metered basis—by CPU usage and storage consumed. But some predictability is built into pricing: There will be a base subscription and the option to buy additional CPU hours at a set rate, said Steve Brodie, chief product and marketing officer at Skytap.

Skytap, which uses VMware and Citrix on the back end, keeps system images up-to-date by applying the latest hotfixes and updates as needed. The service can serve up any operating system that is supported by VMware, and customers may supply their own images, said Brodie. Customer images, however, are not monitored for

METASTORM BINDS **BPM SOLUTION TO** MICROSOFT OFFICE

BY DAVID WORTHINGTON

A Microsoft Business Process Alliance (BPA) partner has updated its flagship BPM solution to bind process activity to Microsoft Office client applications and to SharePoint Server.

Metastorm last month unveiled version 7.6 of its BPM Suite, extending process activity to Excel, PowerPoint and Word 2007. In effect, those Office applications become interfaces for process collaboration, participation and reporting.

Also, BPM Suite supports the Office SharePoint Server 2007 portal interfaces and has a new "notify" gadget for Windows Vista, which alerts users when an item requires their attention.

Microsoft established the BPA in February 2007 to form an ecosystem around its platforms of ISVs, channel development partners and systems integrators.

Metastorm joined the BPA at the end of February 2007. ■

patching by Skytap.

Testing organizations are often short on resources and time at the end of the release cycle, said Brodie. He claimed that Virtual Lab's value proposi-

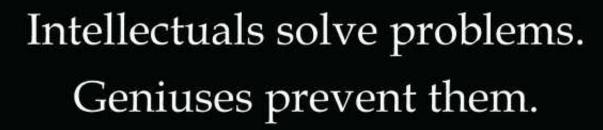
tion is that it provides a large number of configuration options and that clients will not need to set up and maintain their own test beds.

Currently, there are more

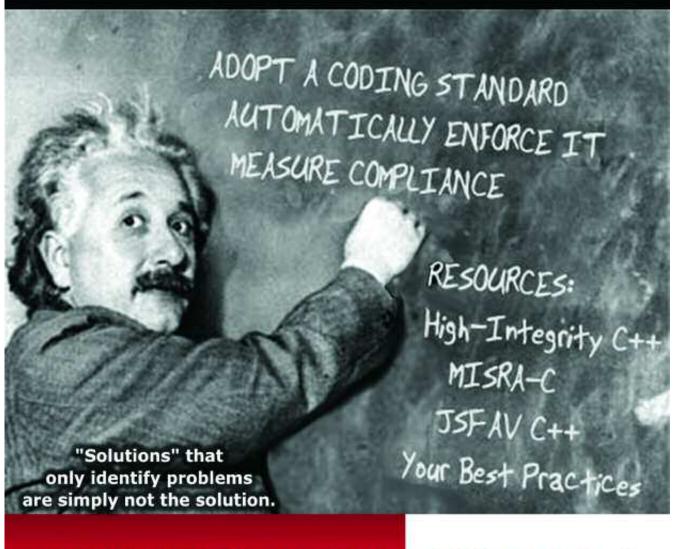
than 50 virtual machines, included in the Virtual Lab library. The company's goal is to exceed 100 by the end of the year, said Brodie. Browser versions may differ, or virtual hardware might

be differently configured.

The Virtual Lab service may be generally available this year, said Brodie, with the caveat that "cloud services" often remain in beta for longer than expected.



Albert Einstein



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NEWS BRIEFS

Microsoft has contributed its Microsoft Scan Service Definition Version 1.0, a Web services protocol specification for consumer scanning peripherals, to the Printer Working Group, a program of the IEEE Industry Standards and Technology Organization. Microsoft said this would make it easier for partner companies to have their products work across multiple platforms . . . Codice Software, a provider of



software products to strengthen application development, said that its Plastic SCM softcodicesoftware ware configuration management product

would be used for the Web site of a charity that benefits an orphanage in Awasa, Ethiopia . . . Open-source database management software provider Ingres created three programs to promote open-source adoption: the Global Ingres University Alliance, the Janitors Project and Open Source Boot Camp. The Janitors Project is a forum for new Ingres community members, while Open Source Boot Camp introduces university students and staff to open-source concepts. The Global Ingres University Alliance is an alliance with universities in Canada and Europe to drive open source.

NEW PRODUCTS

LDRA announced the launch of TBvision, a testing and reporting tool that provides what the company called the "most comprehensive C and C++ coding standards enforcement available." . . . Virtualization company Xenocode launched its flagship Xenocode Virtual Application Studio, an application virtualization environment that allows Java-, .NETand Windows-based desktop applications to be deployed in standalone form. Company executives said the studio allows users to run legacy applications without errors on Windows Vista and to use multiple versions of applications, such as different releases of Microsoft Office.

UPDATES

Gomez has announced that its ExperienceFirst application platform for Web development now works with Internet Explorer 8 beta 1 . . . Sybase iAnywhere announced RFID Anywhere 3.5, an update to its infrastructure toolkit that works with Microsoft's Visual Studio 2008, and is expected to be available this month . . . Open Kernel Labs announced an update to its **OKL4** open-source microkernel, which is based on the company's Secure HyperCell operating environment for mobile devices . . . Indigo Rose added the ability to leverage Microsoft's Windows Installer XML compiler technology in the latest release of its MSI Factory intelligent setup build product for Windows. This ability in MSI Factory 2.0 gives developers easy access to the technology that Microsoft uses internally for creating installers for Microsoft Office and other products. Indigo Rose executives said . . . ZH-MICRO, a provider of software development tools based on C++, has added PHP integration and the ability to create solutions with Web applications to its Visual '08 IDE. Applications written with Visual '08 can run on Linux, Microsoft Windows and Unix, the company said.

PEOPLE

Arun Sarin has stepped down as CEO of telecommunications company Vodafone, and he will be replaced by deputy Vittorio Colao on July 29. Sarin served in the position for five years and will retire after Vodafone's annual general meeting on that date. Sarin is credited with helping Vodafone expand into new markets, including the Czech Republic, India, Romania and Turkey. The company said that its customer base more than doubled globally, and returns to shareholders grew with dividends rising more than 400% ... Jeremy Carroll has joined semantic Web product maker TopQuadrant as chief product architect. Carroll



had previously worked at HP Labs and is noted as a lead architect on the open-source Jena toolkit, a semantic Web framework for Java. Additionally, he has contributed to many semantic Web standards from the W3C, according to TopQuadrant. Carroll will work to extend the company's TopBraid semantic application

CARROLL development platform.



With everything from RIA libraries to Java tools, vendors lined the JavaOne show floor.

JavaOne was not just Sun's show

Third-party vendors made big splashes of their own

BY P.J. CONNOLLY

Sun and the health department weren't the only ones making news at last month's JavaOne conference in San Francisco. Here's a roundup of what SD Times found on the floor and in the neighborhood:

Atlassian released JIRA Studio, a hosted development environment that provides collaboration and issue tracking tools as well as a code repository and code review features. Existing JIRA and Subversion databases can be imported into JIRA Studio. The service is priced at US\$50 per user per month, with volume discounts available.

Cacheonix Systems announced its namesake cache clustering and data grid platform, which company officials say offer latency for put and get operations in the millisecond range. The design of Cacheonix keeps data closer to applications by storing it in memory across a set of commodity cache servers, according to the executives. The company is offering a unique find-a-bug-and-get-alicense scheme to developers who kick the tires on the early access builds.

Canoo demonstrated Ultra-LightClient '08, a rich Internet application library that the company claims "bridges the gap" between classic Java, in the form of Swing UI components, and Web architectures, as an alternative to AJAX. The company expects to release the client library around the middle of the year.

InetSoft Technology released Style Intelligence 9.5, an update to the business intelligence tool that allows scheduled pre-aggre-

gation of data mashups, while adding memory-resident bitmap indexing for analyzing very large datasets, and a new interface for the design of dashboards to the feature set. The company claims the new release is more responsive for designers, and it offers improved deployment, localization and reporting tools.

Liferay announced the release of version 5.0 of its namesake portal software. Liferay Portal now offers a built-in collaboration suite that ties into portal-based Web applications, and it allows the use of both PHP and Ruby. The suite includes a dynamic tagging system, an AJAX-based e-mail client and direct publishing to the Facebook and MySpace networks. Liferay also announced that Sun Microsystems had joined its open-source community, with the intent of using core elements of Liferay Portal in Sun's nextgeneration Web development and collaboration platform.

Protecode demonstrated a beta version of its forthcoming intellectual property and software bill-of-materials management tools and made the beta available as a free download. The beta adds support for the Eclipse C Development Tool and an updated GUI that the company claims streamlines administration by allowing access policies to be defined by project, user and group. It also works with nested intellectual property and includes what the company called a "significantly" larger database of intellectual property and interactive reporting tools.

Morph Labs, with help from Jetty creators Webtide, launched the Morph Application Platform for Java, an application virtualization environment designed with cloud computing in mind. Webtide is providing conversion packages and support offerings to help customers make better use of the open-source Jetty server. David Abramowski, CEO of Morph Labs, claims that Java support puts his company ahead of Google's App Engine, which at this time only supports Python.

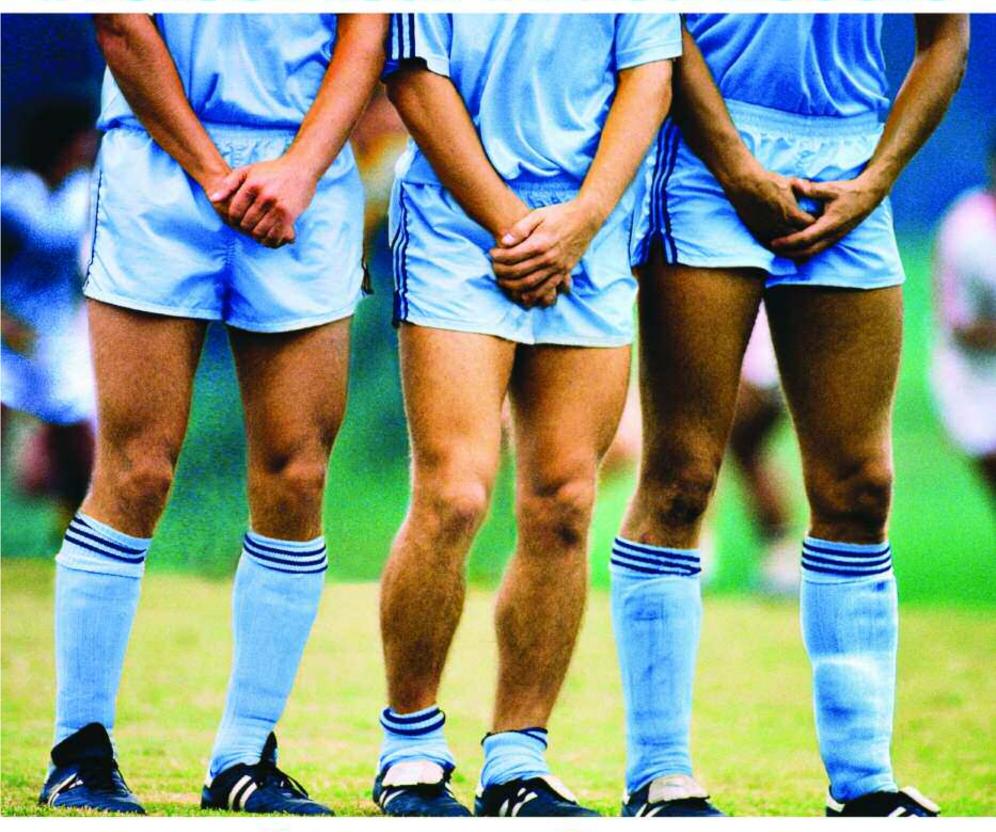
ObjectWave presented the Swan rich Internet application development platform, combining an AJAX framework with what it calls easy-to-use development tools. Swan allows behavior to be defined on the server side of the application, and ObjectWave claims that developers can get right to work without having to deal with custom tag libraries or even JavaScript. The company added that AJAX-based pages could be created with Swan, using nothing but HTML.

The OW2 Consortium announced plans to release a beta of SpagoBI 2.0, an open-source business intelligence platform, this month. SpagoBI is a modular platform that includes development tools as well as server tools and an integration layer that allows external applications to access SpagoBI. The Italian system integration firm Engineering Group, also known as Ingegneria Informatica, is leading the SpagoBI project.

Parasoft demonstrated the next generation of its application security tools, covering conventional application development, outsourced and distributed de-

continued on page 27 ▶

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Microsoft plans native VHD support in Windows 7

BY DAVID WORTHINGTON

Sometimes the world is in a grain of sand. A help-wanted ad has revealed that Microsoft intends to add native support for the Virtual Hard Disk (VHD) format to Windows 7, the successor to Windows Vista that the company has slated for release in 2010.

A job listing posted to Microsoft's Careers site on May 21 seeks a candidate who would be responsible for "creating, mounting, performing I/O on, and dismounting VHDs natively in Windows."

The hire would join Microsoft's Core OS team, which creates the fundamentals of the operating system.

The posting, which explains the reasoning for embedding virtualization into Windows, says, "Virtualization technology has been a great success with Virtual Server and Hyper-V. With native OS support on the horizon, it will become an even greater hit. Our team is making this a reality in

SEC MANDATES USE OF XBRL IN FILINGS

BY P.J. CONNOLLY

The adoption of XBRL (Extensible Business Reporting Language) as a lingua franca of business took a step forward last month, when the U.S. Securities and Exchange Commission voted to require the world's largest companies to begin filing required reports in the XMLderived format for those periods that close at the end of 2008.

The SEC has been evaluating XBRL since 2005. After first collecting data from corporate filers, the regulatory body has since added XBRL filing of mutual fund risk return information and an online database of executive compensation data.

If adopted, the SEC's proposal would see the first XBRL data provided under the scheme become public in early 2009 by those companies, roughly 500 in number.

Other companies using U.S. Generally Accepted Accounting Principles would provide this disclosure over the next two years, while corporations that use the International Accounting Standards Board's reporting standards would have until late 2010 to provide XBRL-based financial disclosures.

Windows 7. Consider the simplicity of backup using a VHD or the portability of a virtual disk backed by a single file.

Microsoft is keeping pace with the technology, said Yankee Group analyst Laura DiDio. "If concerns, DiDio said that the it's built in, it's one less thing to worry about," she added.

Asked whether Microsoft's bundling of virtualization middleware could raise antitrust

company is acutely aware of the terms of the 2002 consent decree that it reached with the U.S. Department of Justice.

In the case of virtualization,

she said, Microsoft is the underdog. "VMware has a substantial lead. Everyone from Citrix to Microsoft to Oracle would concede that [VMware] has the best products," DiDio noted.



IONA's Artix Data Services reduces hand coding

BY DAVID WORTHINGTON

A SOA infrastructure maker has created a transport abstraction layer and data mapping feature that the company says will help shorten the data ser-

vices development life cycle by reducing hand coding.

IONA Technologies has made Artix Data Services 7.3 broadly available. The graphical development tool models data structures and semantics and can configure reusable data transformation and validation services.

When developers expose applications as services in a SOA. it becomes necessary to support the underlying data models of those services. Artix includes a transport abstraction layer that integrates 50 common message transports to help developers change and test transports.

The data service integrates with transports and performs data mediation; this approach means there is less coding, said Ray Christopher, senior product marketing manager at IONA.

As data models acquire more elements, developers require tools to be more productive when creating transformations, said Christopher. He added that Artix Data Services now provides "smart mappings," which include auto layout and transform-route highlighting, data conversions, and a search feature to help developers navigate data models.

Another new productivity feature is Artix's use of aliases, which let users define alternate names for message structures.

"Aliases help IT and business people communicate," said Christopher. Artix Data Services "helps define business views of data models and [creates] automatic HTML documentation."

Finally, the new version broadens IONA's developer platform support by working with Mac OS X and Solaris, as well as Linux and Windows.

COMMUNICATION **RULES TIGHTEN ON MYSPACE**

BY P.J. CONNOLLY

As corporate developers seek ways to leverage social networks for business purposes, there's a well-founded fear of creating security breaches in the process. One social network is taking steps to reduce the exposure.

MySpace revealed new developer guidelines May 20 to govern application communication. The goal is to limit behavior designed to trick users or encourage them to generate traffic.

The first restriction is that giving incentives to MySpace members for sending messages or any type of communication is forbidden. The rule extends to enabling extra features in an application, giving points or using other status enhancements.

Second, MySpace users are to be told explicitly what they are sending at the time of execution. "Share with friends" is no longer enough; "send comment" or "send bulletin" is the new form.

Further details are at the MySpace developer blog. ■

Real Solutions for Real Challenges



ProfitBase 2007 empowers information workers with one consolidated view of the information they need for better and faster decisions. The application is built on top of the .NET platform and utilizes Windows Forms on the client side. An ASP.NET web client is also employed for gathering intelligence. In the past year, ProfitBase also decided to use Microsoft Windows Presentation Foundation for many of the more graphical parts, including navigational menus, within the application. The company needed to find a solution to create consistent user experiences across Windows Forms, ASP.NET and WPF.



Infragistics NetAdvantage empowers developers to build and style exceptional application interfaces and user experiences across multiple platforms. Infragistics feature-rich solutions help enterprises deploy a strategy as part of the application development lifecycle for developing the user experience. "We've standardized on NetAdvantage because it provides coverage for GUI components across multiple platforms which allows us to concentrate on making the application itself better while NetAdvantage ensures consistency, styling and usability in the interface," said Terje Rugland, CTO and VP of Development at ProfitBase.

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of SD Times. The industry newspaper for software development managers debuted in February 2000, and our very first issue documented one of the biggest launches of the modern software era: the creation of Java 2 Micro Edition, the optimized Java runtime for embedded devices. Since then, we've seen new platforms, new paradigms, new companies and more. Join us on a journey back, with stops every five months to check out the landscape.

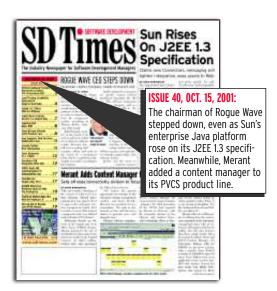
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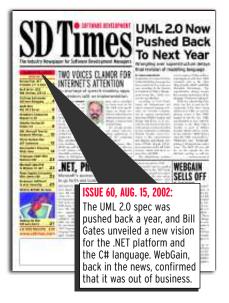








































Google focuses on RIAs to expand Internet economy

book, "Once You're Lucky, You're Good: The Rebirth of Silicon Valley and the Rise of Web 2.0." Indeed, Google has proved that it's

"good" multiple times, changing search, search advertising and online software distribution with Google Apps, and now cloud computing with App Engine and mobile computing with Android.

When Google's Steve Horowitz demonstrated at the I/O conference how a mobile device built on the Android platform could marry Google

Maps' Street View and a compass, and showed the on-screen street image spin 360 degrees as he turned around, he earned a round of awe-inspired applause akin to a Steve Jobs keynote at Macworld Expo.

Google has begun inviting developers to write mobile applications on the Android platform, which may show up on devices before the year is out. In addition, the company is reaching out to the developer community with App Engine, a free platform for creating software applications that then can be hosted free on Google's IT infrastructure. Once usage of an application reaches a certain point, Google will start charging for hosting, but it will have helped many new Web ventures get off the ground in the meantime.

GOOGLE GETS SOCIAL, TOO

What's more, Google is chasing a piece of the social networking Web phenomenon with OpenSocial, which defines a common API for applications that will work across multiple social networking sites, including Engage.com, LinkedIn, MySpace, Plaxo and Salesforce.com.

What all those Google ventures have in common is that they expand the Internet economy, said Vic Gundotra, vice president of engineering for developer products at Google.

"Google was born in and of the Internet," Gundotra said in his keynote. Google's business model is simple, he added: Richer applications mean more users, and greater usage translates into advertising revenue for Google.

Because Google makes its money as the Web grows, all the services promoted at I/O are free and open source: App Engine, Android, Google Web Toolkit or OpenSocial. "Google is committed to working with the open-source community and giving back," said Gundotra.

At first, though, App Engine developers will be limited to writing applications in Python, and Google officials were vague about when other languages would be supported. It's likely they will support other languages because it's in Google's nature to do so, said Carl Howe, a research director at Yankee Group.

"I think they'll support other languages when developers ask them for it," said Howe. "They are a company that builds on a consensus of the Internet." ■



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Google fires up App Engine

BY ROBERT MULLINS

Google has tossed out a 150,000-person waiting list for its App Engine free software development platform, welcoming everyone on it and beyond to create software applications to be hosted on Google's IT infrastructure.

"App Engine is now open for anyone to sign up and begin using immediately," said Kevin Gibbs, technical lead for App Engine, earning him applause from the audience at Google I/O, a development forum held May 28 and 29 in San Francisco.

Google also set fees for host-

ing applications on its infrastructure and unveiled two APIs that would be available for developers in coming weeks. Although hosting fees would apply once an application generates significant traffic, App Engine is intended to eliminate the barrier to entry for many Web developers by letting them create their applications and launch them at no cost, Gibbs said. "App Engine will always be free to get [users] started."

The search engine provider took another step toward advancing the Web with a preview release of App Engine on April 7. Google initially limited the number of developers who could use App Engine to 10,000, but quickly built a waiting list that grew by 10,000 to 15,000 names per week, eventually reaching 150,000 people, said Pete Koomen, a Google App Engine product manager. The company admitted 75,000 into the program, then, finally, everyone else.

However, Google will keep other limits. Hosting will be free for apps that use up to 500MB of storage, and it is restricted to providing enough CPU power and bandwidth to accommodate $5\ \mathrm{million}$ page views per month. For developers who want more capacity, the following fee schedule will apply sometime later this year, Google said:

- Processing: \$0.10–\$0.12 per CPU core-hour
- Storage: \$0.15-\$0.18 per GB per month
- Outgoing bandwidth: \$0.11-\$0.13 per GB (from the application)
- Incoming bandwidth: \$0.09-\$0.11 per GB

We have been asked by a lot of developers to be more transparent about our pricing structure so that they can plan which hosting provider they want to go with," said Paul McDonald, another Google App Engine product manager, adding that he considered Google's pricing "competitive" with other hosting services.

By allowing developers to create and launch applications for free, then charge them for hosting as they grow, App Engine could be a catalyst for new growth in the Internet economy, said Carl Howe, an analyst with Yankee Group.

"Any developer, even if they are working in their basement, can all of a sudden work at the scale of Google infrastructure if they pay them for it. That is a capability that developers have never had before," said Howe. "It means people will try more things and, if they work out, then we'll see some more businesses created." ■



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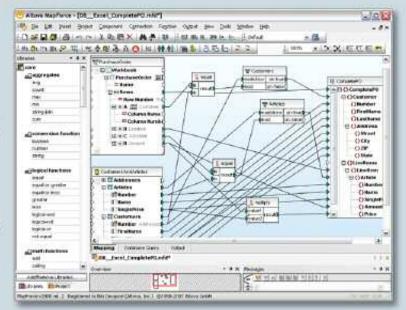
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Google toolkit gains Java 5 syntax support

BY ROBERT MULLINS

If AJAX isn't the platform of the year, don't tell Google, which hopes to hasten development of AJAX applications with another preview of its Google Web Toolkit (GWT).

Google Web Toolkit Release Candidate 1.5 was introduced at the Google I/O developer conference last month.

Highlights of the release include support for the syntax of Java 5—the latest iteration of the Java programming language-and a compiler that converts Java code into JavaScript, a lingua franca for browsers with any pretensions to market share. "That's the premise: development in Java, deployment in JavaScript," said Bruce Johnson, the engineering manager for GWT at Google.

Google developed GWT on the premise that the browser is the "application platform of choice," said Johnson.

"With the advent of AJAX and rich browser techniques, everybody started to realize that the browsers are pretty capable as an app platform," he added.

The compiler in version 1.5 produces faster JavaScript than a person could write by hand, Johnson said, and users of version 1.4 can download 1.5 and see improvement in their applications right away.

"They recompile it and their application gets noticeably faster. That's a very typical phenomenon, and that's a really big value proposition," he noted.

But AJAX development for the browser is limited by the various quirks that develop in different browser types, Johnson added. By compiling Java code into JavaScript, GWT 1.5 minimizes many of those quirks.

Google is embracing the browser—rather than the desktop or server—as the preferred application platform because it is ubiquitous and makes an application available globally, said Vic Gundotra, vice president of engineering for developer products at Google.

"I think the Web has matured at a pretty amazing rate. In terms of the platform, the Web has won," said Gundotra, during a news conference following his keynote address at the conference.

The GWT is open source and free to developers, including those who will join Google's new

App Engine development platform. App Engine is a free service for building software applications and hosting them free on Google's IT infrastructure. Google announced new details about

App Engine at Google I/O and presented a demo of Android, Google's effort to create a completely open-source software stack for running on mobile devices (see story, page 26).

The crowd of more than 2,000 applauded when Google Android engineer Steve Horowitz demonstrated a mobile application of Google's Street View mapping service that shows

a street-level photo of a location. Coupled with a compass function, the image on a phone panned a street scene as Horowitz moved the phone around the compass points.



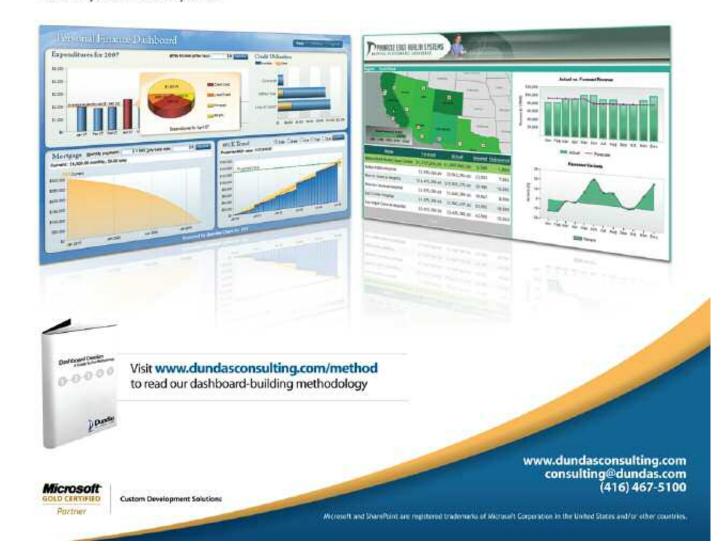
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Android apps draw 'oohs, aahs' at developer conference

SAN FRANCISCO — Look out, iPhone. Google's reflection in the rear-view mirror just got larger, as a prototype running the company's Android platform wowed the audience of 3,000

developers here at the Google I/O conference.

The prototype device, demonstrated by Google engineer Steve Horowitz, was running Google Map's Street View, the mapping feature that shows street-level photos of locations, with an embedded compass. As he slowly turned in place, the image of the street on the phone turned with him, and the audience, viewing the image on large monitors, applauded.

kind of applications that you will build for the platform," Horowitz told the crowd gathered for the convention, held here May 28 and 29.

Android is one of the free

and open-source systems that Google is giving away to the developing public, in hopes of driving the next phase of the Web-based economy. Google executives were vague on details but said they anticipate that later in 2008, mobile devices will come to market with an Android software stack that delivers "enhanced" browsing, calendar, e-mail, media, navigation and other services to the palm of a user's hand.

Google is the driving force behind the Open Handset Alliance (OHA), an organization that now has close to 40 member firms worldwide, including handset makers, component makers and carriers. The OHA released an Android software development kit in November 2007 to spur the creation of mobile applications licensed under the Apache v2 open-source license.

An Android platform is taking shape, said Andy Rubin, Google's director of mobile platforms, at a news conference during the Google I/O conference.

Google formed the OHA "to create a little bit of a structure" Android. Rubin around explained. He anticipated that development will continue on Android until the platform reaches the point where version 1.0 is ready for the device market.

"When a handset is capable of running the platform and a consumer is happy with the experience, that's what we call 'critical mass,' "Rubin explained.

Another application demonstrated on the Android prototype was a widget that magnifies a section of the Web page image on a device.

Although the device demonstrated at the conference had a touch-screen similar to Apple's iPhone, Android could also run on a phone using trackball navigation, said Rubin.

Google's strategy is to position Android as an alternative to the myriad mobile platforms that complicate life for developers, said Vic Gundotra, vice president of engineering for developer products at Google, during his keynote address.

"We have to support so many platforms," Gundotra noted. "It's crazy. The marketplace is very fragmented, and not every development organization has the resources Google has [to support all of them]." ■

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Wind River and Intel rev open-source auto platform

Goal: Simplify in-vehicle devices

BY P.J. CONNOLLY

With an assist from Intel, Wind River Systems has leapt into the in-vehicle infotainment market, saying it will make a commercial platform available next year. In addition, Wind River, which made its announcement at the recent Telematics 2008 conference in Detroit, will make the project code available to the open-source community by summer's end.

The Wind River Linux Platform for Infotainment will be optimized for Intel's Atom processor, which the chipmaker introduced in April. According to Wind River, the platform will include such third-party applications as Nuance's speech-recognition and Gracenote's music management and playlisting technologies.

Wind River's goal is to reduce the complexity of the in-vehicle device market by providing an integrated, Linuxbased development environment, said the general manager of the company's Linux products division, senior vice president Vincent Rerolle, in a prepared

The platform will work with consumer electronics devices, such as the iPod, and offer 3D graphics. Additionally, it would work with core automotive specifications, including a controller-area network, a commonly used bus for industrial automation and in-vehicle communications, and Media-Oriented Systems Transport, an emerging networking standard for automotive multimedia.



Rerolle: Integrated Linux environment will drive infotainment device market.

THE DESIGN CHALLENGE

Major manufacturers and suppliers in the auto industry, such as BMW, Bosch and Delphi, are working with Intel and Wind River to develop the platform. The challenge is to provide connected, graphics-intensive and multimedia-oriented applications in a low-power environment meeting safety and usability requirements. A commercial version is expected in the second half of 2009.

Wind River will deliver the platform's specification and code to the Moblin.org in-vehicle infotainment community site, hoping to help manufacturers save time and money in product development by providing an open platform. If things go as planned, that will happen by August. ■

velopment, and SOA development. Auditing is not enough, said Wayne Ariola, the company's vice president of strategy. "True success in application security requires an in-line process ... to ensure that the application adheres to the organization's security policy," he added.

Motorola announced an expanded line of features for its Motodev Studio platform, including an updated set of Java ME tools that work with the company's latest Linux and Symbian/UIQ handsets, as well as support for the JSR 248 mobile service architecture spec. The company also disclosed plans to release native C/C++ tooling for UIQbased devices by midyear as a beta. Motodev Studio for WebUI and Studio for Linux are likewise expected to be available by late June as "technology preview" releases.

Nokia announced the creation of a

tool chain intended to simplify collaboration between graphics designers and software engineers who are creating mobile applications. As part of an effort with rich media specialists Ikivo, the Nokia SDKs for Java are integrated with Adobe Illustrator, Ikivo Animator and NetBeans, using scalable vector graphics to capture visual designs for later deployment. This will allow UI designers to add GUI elements directly to a project without requiring additional translation into Java code, Nokia said.

Conversay announced a final release candidate of JSR 113, the Java Speech API 2, or JSAPI, that is targeted for Java ME devices. It also runs on Java SE. The company also showed off 3DK, the JSAPI2 Development/Demonstration Device Kit, an integrated package of hardware and software meant to give developers a leg up on building speechenabled mobile applications.

TELELOGIC TOOLS BEAR IBM LOGO

Just because one's company is sold does not mean that the flow of new products can falter; if anything, that's when it's most important to show customers that it's business as usual.

IBM Rational has introduced new versions of software development tools from Telelogic, which IBM acquired in April, for wider collaboration among participants developing complex embedded systems. Other new features are also included.

Telelogic was developing many of these newly released tools before IBM made its US\$845 million bid for the company. According to IBM, among the changes to the Telelogic portfolio, announced May 20, are:

Telelogic Change 5.0: New capabilities are intended to support global ALM efforts, including integration with the company's Focal Point and System Architect tools, for process analysis and product management.

Telelogic DOORS: DOORS 9.0 adds Telelogic Directory Service for common user administration across multiple DOORS servers; DOORS Web Access, a rich Internet application for collaborating through a Web browser; DOORS/TraceLine, which lets developers visualize, browse and manage DOORS integration with Microsoft Team Foundation Server for those developing in the Visual Studio IDE. TraceLine is available now, and the others will be by the end of the second quarter.

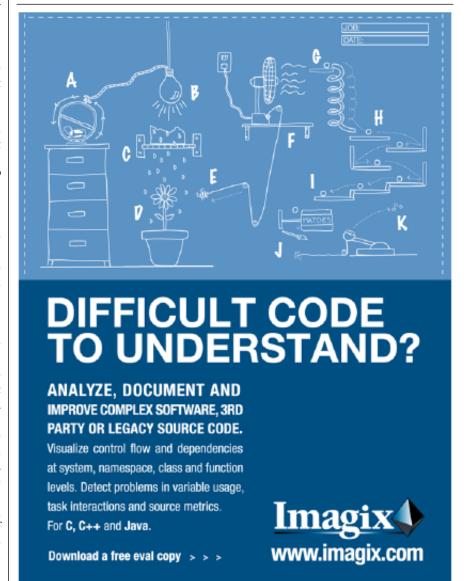
Telelogic Dashboard 3.5: It provides managers with project status and trend information to help meet project goals across multiple projects.

Telelogic Rhapsody: An update due later this summer adds a Telelogic Rhapsody-Eclipse plug-in, to integrate the Rhapsody model-driven development tool into the Eclipse open-source IDE.

The demand for improved collaboration tools is driven by global companies that may have product development in the U.S., sales and marketing in Europe and software development and testing in China, India or Russia, said John Carrillo, senior director of Telelogic solutions.

"Being able to have a common collaborative environment just to synchronize change management is a huge issue," Carrillo said. "There are a lot more companies that are trying to create common best practices and processes and consolidate as many tools as possible to facilitate those processes."

The updates are free to current Telelogic customers. ■



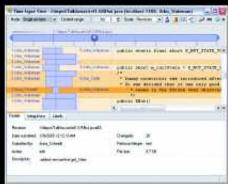


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Time-lapse View lets developers see every edit ever made to a file in a dynamic, annotated display. At long last, developers can quickly find answers to questions such as: 'Who wrote this code, and when?' and 'What content got changed, and why?'

Time-lapse View features a graphical timeline that visually recreates the evolution of a file, change by change, in one fluid display. Color gradations mark the aging of file contents, and the display's timeline can be configured to show changes by revision number, date, or changeset number.

Time-lapse View is just one of the many productivity tools that come with the Perforce SCM System.



Perforce Time-lapse View



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SPEC-LADEN JAVA SPEC-LADEN JAVA TURNS OFF DEVELOPERS TURNS OFF DEVELOPERS TURNS OFF DE EASIER TO DIGEST? BUT WILL EE 6 BE EASIER TO DIGEST?

BY ROBERT MULLINS

on't expect people to bring lawn chairs to camp outside Sun Microsystems' headquarters waiting to pick up their copy of Java EE 6 when it's released this year. After all, the platform for server applications isn't the hottest new cell phone or game console. While Sun is touting the modularity and simplicity of the next generation of the Enterprise Edition, many are skeptical about its promise given the underwhelming response to its predecessor, Java EE 5.

Although software development experts involved in the Java Community Process (JCP) are working to finalize the specifications for Java EE 6, due by year's end, the market may already be passing Sun by. To minimize the notorious "Java bloat"—the result of adding APIs and other specifications that fatten the platform without discarding old ones—Sun is preaching the virtues of modularity. Developers need only use the modules, or in Sun's parlance, "profiles," prescribed to build the particular application they have in mind.

To be sure, Sun can point to improvements in Java EE 6 over EE 5 and in EE 5 over its predecessor. But other software companies, commercial and open source, are formulating solutions that can be used well before Sun can get EE 6 out the door.

"Modular design \dots is something [application vendors] are basically taking into their own hands," said Jeff Genender, a representative in the JCP of the Apache Software Foundation.

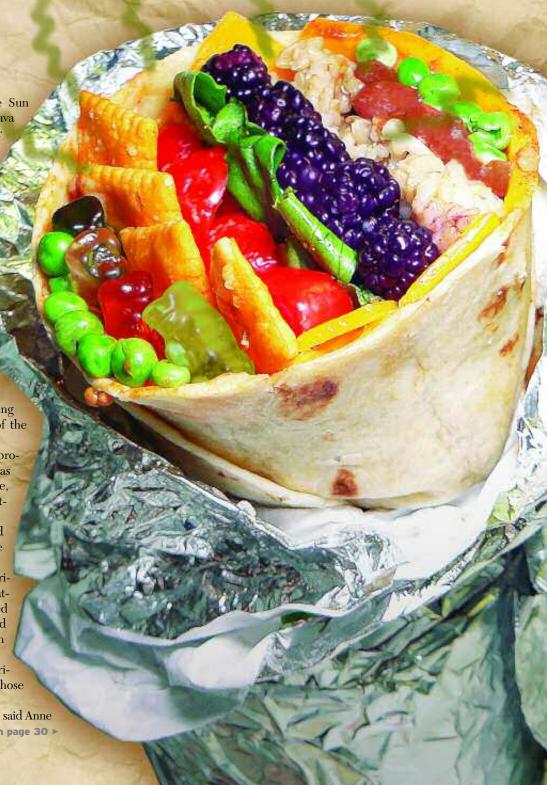
Apache, a nonprofit group supporting multiple open-source software projects, developed the Geronimo application server, whose latest update was delivered April 28. Geronimo features GBeans, a plug-in-based architecture, which lets users remove unneeded specs from Java EE 5, building lightweight configurations of the server.

A developer can start with what is basically a Geronimo kernel and add components as plug-ins to create a specific software stack, or start with the full Java EE 5 stack and remove components, Genender explained.

In a different approach to fighting Java bloat, Intelliun is using model-driven development, which adds an abstraction layer between the Java EE platform and the application layer. That way, the application can be developed without the complications of the platform layer, said Iyad Jabri, president and CEO of Intelliun. "Our business model is to protect our customers from those changes," said Jabri.

According to critics, the industry's push for Java modularity was partly driven by Sun's failure to significantly improve the design of Java EE 5 and by those critics' doubts that EE 6 will be much better.

"Java EE 5 failed to significantly reduce the complexity of the environment," said Anne
Thomas Manes, vice president and research director continued on page 30 >



Crammed with specs, Java creates

◄ continued from page 29

of Burton Group, an IT research company. "It reduced the lines of code that people had to produce, but it didn't reduce the complexity."

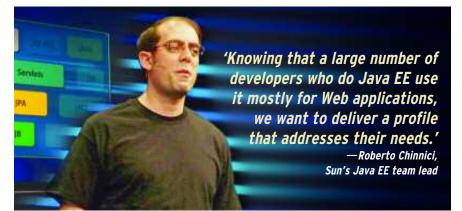
Adding specifications and APIs without discarding outdated ones has created "this beast" that Java EE is today, Manes said.

But Sun can point to several changes in Java EE 5, finalized by the JCP in May 2006, that the company argues improved performance over its predecessor, J2EE 1.4. Those include the addition of the Java Persistence API, a framework for more easily managing relational databases in an application; more default settings for simplified programming; Enterprise Java Beans, which introduces a degree of modularity into development; and JavaServer Faces, a component to simplify design of the user interface.

"Java EE 5 has been very well received," Roberto Chinnici, Sun's Java EE team lead, said last month in a presentation at JavaOne.

The Java EE 5 software development kit has been downloaded 3 million times since it was introduced, both as a standalone and with downloads of NetBeans, Sun's integrated development environment (IDE) for building Java applica-

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tions, Chinnici said.

However, the market didn't exactly embrace Java EE 5 to the extent that Sun claims. "Java EE 5 Simply Too Complex," read an SD Times headline from Nov. 1, 2006, above an article quoting Richard Monson-Haefel, a Burton Group analyst at that time.

To this day, some application server vendors still haven't certified on Java EE 5, added Rod Johnson, CEO of Spring-Source, the commercial sponsor of the open-source Spring framework for Java application development.

"If you take a look at the lukewarm take-up of Java EE 5, it was beginning to head toward irrelevance," said Johnson, then added he hopes EE 6 will restore

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its relevance.

IBM, for instance, only recently "fully certified" Java EE 5 in beta release, with general availability expected later this year, spokesman Matt Berry wrote in an e-mail.

Legacy customers are slower to implement new platforms, such as Java EE 5, while newer customers wishing to adopt advanced technologies embrace them, Berry wrote. To accommodate the latter group, IBM offers Feature Packs, which bundle some of the newer components of EE 5 in its WebSphere Application Server. IBM has released two Feature Packs, one in June and the other in November 2007.

Sun executives defended their Java

EE strategy at JavaOne. Although he called complaints of Java bloat "overstated," Rich Green, executive vice president of software at Sun, said the company is developing a solution because customers want one.

"We're addressing the market and we're doing it," Green said at a news conference during the show. "I think we have that one close to being solved."

CAN'T THROW ANYTHING AWAY

The main contributor to bloat is the presence of outdated specifications that are superseded by newer ones, but all of them remain in the code. Sun can't discard those legacy specifications because someone, somewhere, is still using them. In a sense, Java EE is like the parts department of a car dealer. In the real world, a 2008 model may have a much better fuel injector than a 2001 model, but when the owner of a 2001 needs a new fuel injector, the dealer would have to order it from a parts supplier if it isn't in stock.

But in this example, the auto dealer has stocked a decade's worth of older parts on a back shelf to gather dust; rearranging the inventory is essentially what Sun is doing in "pruning" Java EE 6.

The JCP is the governing body that





bloat, discord

determines which specifications should be included in Java EE as well as Java Standard Edition (SE), Java Micro Edition (ME) and other categories. Although Sun's people dominate the JCP, it also includes representatives of application server vendors, such as IBM, Oracle, Red Hat and others; representatives of opensource foundations, such as Apache; and other independent software engineers. Each Java specification is given a number, called a Java Specification Request (JSR).

Java EE 6 will prune, for instance, the JAX-RPC specification (JSR 101) for delivering a Web service, a function delivered from one computer to another over a network, such as the Web. JAX-RPC has been supplanted by the JAX-WS (JSR 224), which performs the same function, only better. But APIs such as JAX-RPC have to remain in the inventory, said Sun's Chinnici, the specification team co-lead for JSR 316, the overarching specification for Java EE 6.

"These APIs made it into the platform because they seemed to have been the answer at that time, but they are not something developers should look at for new development," said Chinnici, in an SD Times interview. Pruning, he continued, means that Sun would recommend that developers use JAX-WS rather than JAX-RPC, and that application server vendors would probably not include JAX-RPC in their Java EE 6-based products if they determined their customers would not need it.

Java EE 6 will reduce the problem of bloat by including what Sun calls "Web profiles," a set of technologies designed for developing particular applications delivered over the Internet.

"Knowing that a large number of developers who do Java EE use it mostly for Web applications, we want to deliver a Web profile that addresses their needs more directly but is still part of the EE family," Chinnici said. "A lot of these developers end up not using some of the technologies that today are in the platform, and that's fine. But I think the Web profile gives them something more targeted."

JAVA EE 6: TOO LITTLE, TOO LATE?

While the Web profile approach brings modularity into Java EE 6, Sun's solution "is too little, too late," said Burton Group's Manes.

In contrast, she pointed to Apache Tomcat, the Apache implementation of two Java EE technologies: Java Servlet, for extending the functionality of a Web server; and JavaServer Pages, for creating

MODULARITY TOPS JAVA EE 6 GOALS

Despite its claimed improvement in ease of use, Java EE 5 received a mixed response from the market. Sun Microsystems is trying to make the platform more modular in Java EE 6, which is expected to be released in the fourth quarter. Roberto Chinnici, who leads the Sun Java EE team, explained some of the company's guiding principles as they apply to Java EE 6, during a keynote address at JavaOne 2008:

- Rightsizing "means making the platform the right size for you," Chinnici said.
- Extensibility supports more opensource, third-party libraries, frameworks and tools that work with Java.
- Pruning designates certain APIs and other specifications as outdated or superseded by other ones; develop-
- ers of new applications should ignore the pruned specs.
- Profiles refer to collections of APIs selected for a particular application server role, such as a Web server.
 Other profiles for telecom, messaging, transactions or other applications could be created through the Java Specification Request process.
 Robert Mullins

dynamic Web content. Although those will be included in EE 6, they're already available in Tomcat, Manes noted.

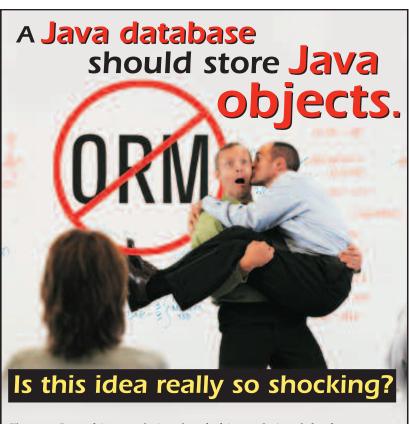
"There are a lot of people who've been developing apps based on that profile, before it was a standard [EE 6] profile," she added.

Also, the Web profile so far is the only one in Java EE 6 that, even if it does address the needs of most EE developers writing Web applications, doesn't serve people trying to develop other applications. EE 6 could also use a profile for Web services, back-end transactional applications or messaging services, Manes said.

In his JavaOne presentation, Chinnici said that profiles could be added by filing a new JSR for each. He gave the example of a telecommunications profile that would integrate the Session Initiation Protocol used in VoIP and instant messaging into an application that would be developed on Java EE 6.

Burton Group's criticism of Java EE stands in marked contrast to the group's glowing praise of Java SE 6, introduced in late 2006.

"Java SE is a phenomenal platform,"
Manes said in a recent SD Times intercontinued on page 33 >>



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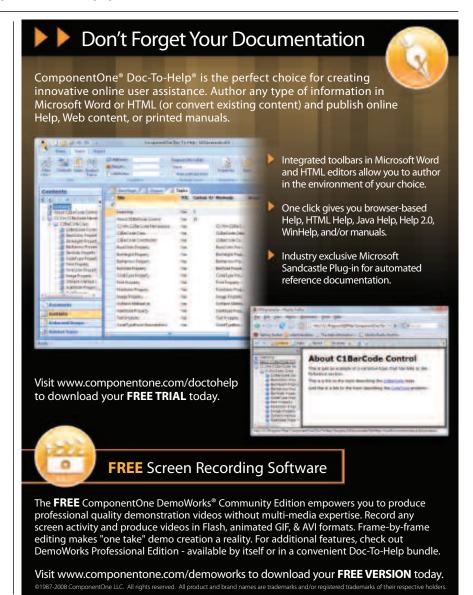
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Can EE 6 relieve Java bloat?

◄ continued from page 3:

view. "It's more popular now than ever before. It is the most popular programming language and will remain so for a very long time."

According to Sun, the desk-top-focused Java SE 6 removed more than 300 bugs, improved native graphical user interface integrations, dealt more easily with XML, enhanced application performance by an estimated 15 percent compared with SE 5 and added the ability to monitor running applications.

Sun issued a beta release of Java SE 6 update 10 in April, and the company launched Java SE for Business, a revised support program that lengthens to 15 years the paid SE support enterprises can get from Sun. At JavaOne, the company released an open-source Java Development Kit (JDK) for SE 6.

So, why is Java SE great and Java EE a failure? Manes argued that Sun needed to start battling bloat sooner. "Sun should have adopted the model of profiling EE about five years ago. If they had done that then, I suspect that EE would still be lean and mean and very popular."

But Sun said it is also offering modularity to simplify Java EE in its own application server, GlassFish. JavaOne featured a technology preview of version 3, which starts with a tiny 98KB kernel download, onto which modular components can be added depending on the application being deployed.

"I don't think 'bloat' and '98K' are words you use in the same sentence," Sun's Green said at the conference.

While Sun has its critics, it has its defenders, too.

"Java EE 6 looks like a pretty radical overhaul and likely to make enough of a change that it will keep Java EE relevant," said SpringSource CEO Johnson, who added that his company will certify a new version of its Spring platform on EE 6 early next year.

What's more, Sun has another friend in Brian Eubanks, the owner of Build Software, a software development, training and consulting firm, and author of the 2005 book "Wicked Java Code," which details the multiple APIs and other intricacies of Java.

"I did it for the love of Java,' Eubanks said of the book.

Java EE may be bloated and

complex, he said, but Java EE 5 did make some important improvements for which Sun and the JCP should be applauded. For example, the annotations feature lets developers hit a few keystrokes that represent larger

sections of code that are quickly added without having to type the code manually. EE 5 also better defines metadata, the "data about the data," which makes it easier to manage data in developing or running an application. But the best thing about Java isn't the language but the core design feature of the Java platform, expressed in the "write once, run anywhere" mantra that has defined Java since Sun introduced it in 1995.

It's the Java Virtual Machine—the component of the Java platform that makes it possible to run a Java application on any operating system—that still impresses Eubanks the most.

"The JVM is by far the most powerful and most exciting part of it. You can run the code anywhere," he said.



FROM THE EDITORS

Today's cloud forecast: sunny

Ploud computing is becoming so popular as a discussion topic that weathercasters may suffer a shortage of cloud graphics for their maps. All the best ones will be taken by technology marketing materials.

As demand for computing capacity grows but funding to add capacity shrinks, enterprises seek alternatives. The cloud premise promises that instead of running their own data centers, businesses can plug into someone else's massive infrastructure—like Amazon's or Google's. Why rent when you can buy?

Google was the latest to put its head in the clouds, officially launching its App Engine service at the Google I/O conference last month. Users can develop a software application for free and host it for free on Google's IT infrastructure, unless it needs more than 500MB of storage or enjoys more than 5 million page views a month; at that point, hosting would cost money. As an indication of interest in cloud computing, Google initially sought to limit use of App Engine to 10,000, just to be able to manage the fledgling program, but quickly accumulated a waiting list of 150,000. It relented and invited all comers to sign up.

Google certainly is not alone. Amazon.com was one of the first, selling compute time along with its books, CDs, digital cameras and other merchandise through its Elastic Compute Cloud service. The much smaller Salesforce.com, which began by hosting sales force automation applications over the Internet, launched Force.com earlier this year to help develop and host applications in its cloud.

A Yankee Group research report identified 27 companies as vendors of one kind or another in cloud computing. That's a lot of cloud graphics that your local TV weatherman won't be able to use.

Cloud computing is prompting other companies to develop related services. Informatica, which helps businesses organize, secure and extract value from data, was expected to launch a cloud-related service at a user conference held June 3 in Las Vegas. The cloud will just be one more place where a company keeps its data. An Informatica media briefing slide presentation used up 10 cloud graphics. And that's just one company.

And cloud computing is not just for startups without the money to build their own data center. Enterprises are the No. 1 user of cloud computing services, according to Yankee. They might not use it for missioncritical production applications, but they are going to the cloud to run certain IT projects.

Given the activity on the cloud computing front and the participation of players like Amazon and Google, the forecast seems downright sunny.

Snapshots of history

s the newspaper of record for the software development industry, $m{\Lambda}$ SD Times has seen a lot of changes since its launch in 2000. Our very first issue coincided with Sun's release of Java 2 Micro Edition. We've chronicled the launch of the .NET Framework, the rise of multicore processing, the foundation of Eclipse and the whole sordid SCO affair. When you look back over the past 200 issues of the newspaper, there's a lot of history.

History wouldn't be history, of course, without the meteoric rise and tragic fall of its players. Thus, the saga of WebGain, encapsulated within the pages of SD Times. Technology empires have been born, flourished and been acquired, often by the voracious IBM and Oracle. The old has become new again, as Apple rose like the Phoenix from the ashes. The new has challenged the old, as Google came from nowhere to trouble the mighty Microsoft.

We look back at the past 200 issues of SD Times on pages 20 and 21. Some of the news we've covered seems so unimportant now: Who really cares about the XML alliance formed by eXcelon and CSI USA? Other trends were vital, such as the creation of UML 2.0 and the struggle to dominate server virtualization.

We hope you enjoy our retrospective as much as we enjoyed creating it. ■

Drag .NET

had two weeks to secure my home against a second burglary. Local youths or, as the responding officer called them, "punk kids," had been breaking into dark houses, drinking the liquor, and stealing whatever cash and small valuables were lying around. We had been madly fortunate in that as the lock had been jimmied free from the

door, the burglar's tool-a small screwdriver, judging by the wood scars-had lost leverage before the last of the screw threads had pulled free. Apparently, the burglars had moved on to easier targets, not realizing how close they were to getting in.

My resulting journey into the world of home security was a painful reminder of

what it's like to be a consumer, not a producer, of technology solutions. Two of the most humble artifacts in software development are the glossary and the simple flowcharts that illustrate the highest-level views of the system. Developers and user representatives are so close to their systems that they become deaf to the density of acronyms and the overloading of general-purpose words with connotations specific to the system. For instance, with the Insteon protocol, "senders" and "receivers" are used, while other protocols have "sources" and "sinks," an understanding that's important because "receivers" are perfectly capable of sending out acks and nacks. The lack of a simple flowchart for "pairing" the automation appliances was terribly frustrating, but the utility of such a diagram would probably be lost on someone who had learned the operation months or years earlier.

A variety of technologies can add security to a house (the technology of "dog" having been thoroughly diluted in recent months by irresponsible neighbors who had trained the neighborhood to understand that dogs barking meant either that the sun was present, or possibly not). Our neighbors pay a fee for ineffective remote monitoring of door and window sensors, and I thought that I could harness some surplus CPU cycles to create a decent system. Surely the tying together of motion sensors, video cameras, alarm horns and the Internet (for receiving messages on cell phones and monitoring the imagery before calling the cops) was a solved problem. Again, this is familiar to me "from the other side." The difficulty clients have is understanding that, no, it's not a solved problem, and solving it for the first time will take a good deal of time and effort.

SETTLING ON A TECHNOLOGY

My wife and I were heading for vacation in two weeks, which introduced a serious time constraint, particularly since we live in Hawaii and package deliveries take

several days. Home security technology falls under the rubric of "home automation," and there are a handful of technologies from which to choose. By far the most established is X10, but it has a bad reputation for reliable signaling. Z-Wave and ZigBee seemed to have few products in the channel, while Insteon seemed to have quite a few and also boasted X10

> compatibility. So I ordered two motion detectors, an Insteoncontrolled outlet controller, and an Insteon-USB linking unit. In so doing, I locked myself into a technology stack in a manner that probably would strike a person knowledgeable in the field as unforgivably ill-informed.

> I also headed over to the local big box store to investigate

security cameras, which are a world unto themselves. I was impressed by the performance of the three wireless cameras in the \$150 bundle but was stymied at the receiving end. Although my graphics card had TV-in capabilities, it also had notoriously cranky drivers, and I could not get the video cameras to display. As a quick alternative, I tried to convert my existing Webcam into a security system. Home-Camera.com, still in beta, looked to be exactly what I was seeking. Basically you run an ActiveX control, and images are pulled from it in response to your requests when you're logged in remotely. Seemingly better still, scene-based motion detection is used to trigger events, sending you an SMS and beginning recording. Unfortunately, the system isn't quite there: I never received the phone messages, and the motion detector proved overly sensitive to dawn, dusk and other changes in lighting.

When the Insteon units came, I quickly found out that the software I'd bought was not only unpolished and inflexible, but it was also burdened with a clunky registration process and locked its license to my hardware. In a few hours, I found OSS foundations for a much better experience. Being able to open up Visual Studio, import a few COM libraries and start reacting to signals from my motion detectors with phone and e-mail messages, Webcam activation, and greatly amplified "Intruder alert!" sounds constituted the type of control over technology that is denied to most users.

A great deal of home automation hardware and software seems devoted to controlling lawn sprinklers and home theater lighting. That doesn't particularly interest me, but a few months ago, on Hack-A-Day, there was an article on an Arduino-controlled espresso maker.

Larry O'Brien is a technology consultant, analyst and writer. Read his blog at www.knowing.net.



Reclaiming the ESB

he enterprise service bus was a term coined by industry leaders to describe a new type of middleware, one characterized by a focus on services and service-oriented architecture.

At the time, I had been working on XML, Web services and integration at the IBM Hursley laboratory, which is the home of the MQSeries (now WebSphere

MQ) product. I spoke with a lot Paul Fremantle of customers who were in the early days of integrating I2EE with other systems. One of the strong themes that we heard was that leading customers were moving from opaque data formats to well-defined XML messages with uniform schema.

The move was from binary and delimited formats, such as CSV, to structured and stan-

dardized data interactions. It was really a move from message-oriented to serviceoriented. By pushing a common format throughout the enterprise, the architecture forced three key outcomes:

- Simplicity of integration. The integration layer is straightforward and uniform.
- · Flexibility to restructure, merge or demerge. Any system could connect or be replaced if it had the uniform interface.
- · Compartmentalization. Each application provider owned the job of dealing with its proprietary model, and no one outside that group needed to know

The answer to the age-old question, "How

many licks does it take to get to the Tootsie

Roll center of a Tootsie Pop?" reveals two

indisputable truths. The first is that the SD

Times editors are in a silly 200th-issue

mood. The second is that statistics aren't all

that they're cracked up to be: Just because

you can measure something doesn't mean

Roll Pop candy debuted in 1970, posing the

question above. The answer was always

"three," because the wise Mr. Owl crunched

fectionary researcher Erin Broadhurst, was

Our methodology, devised by senior con-

The famous commercial for the Tootsie

that the measurement is meaningful.

the candy instead.

How many licks does it take?

about the internals of the system.

This was what we now call SOA. The idea of a uniform communications system with every party talking in a common format in which anyone could connect to anyone else would describe a "bus."

Since then, many companies have come out with enterprise service buses, but they do not encourage the model I've

> described. Effectively, most of the products on the market called ESBs encourage a centralized integration platform.

> What is the difference between this model and the ESB one I discussed above? Fundamentally it's that the conversion from internal formats and models to the common uniform model happens in the center—in the bus—

and is not owned by the application owners. This is an anti-SOA pattern. The most important aspect of SOA is ownership. The point of a service provider is it takes full ownership of the problem domain.

If I have to send COBOL commarea messages to a Customer Information Control System mainframe application using a special gateway that talks SNA (Systems Network Archiecture), then that is not a cleanly encapsulated service. Providing a centralized broker that encourages users to keep their existing middleware and protocols makes life easy, but it

more rigorous, requiring participants to lick

the candy as many times as it took to con-

sume all the hard-candy coating and reach

the Tootsie Roll in the middle. Indeed, partic-

ipants were warned to lick only. At no time

were they allowed to suck on the pop or bite

into it. To ensure scientific rigor, participants

had to count every lick. They were not

varied widely. We wonder about the individu-

als who achieved a suspiciously even 600 and

2.000 licks. And we are amazed at the tenac-

Further reading: "How to Lie with Statis-

ity of the sucker who counted up to 6,682.

As you can see from the chart, results

allowed to estimate or extrapolate.

DATA WATCH

doesn't help foster SOA. Instead, it forces a central ESB team to deal with every application, format and protocol in the

So where did it all go wrong? Well, think back and remember that when the SOA and ESB terms were launched, the predominant integration product was the Enterprise Application Integration (EAI) hub. The vendors of those products were largely caught on the hop.

Gartner and other industry analysts started telling the market that an ESB was essential integration middleware, but those companies lacked an ESB to sell. So they guickly added some XML and Web service adapters into their EAI hub and branded it as an ESB. As a result, the market has been swaved extraordinarily by a set of products that encourages centralized integration. Think of Web services as lipstick and the EAI hub as a nice little porker.

If you look at the original picture of an ESB, it's not clear that you need any "ESB" product to implement it. In that story, the ESB was a virtual construct made up of the applications communicating via a uniform set of protocols and schemas. That was the approach supported by the REST model. Yet, there is a place for runtime support for your ESB.

Here is my simple list of facilities in an ESB runtime that encourage SOA:

Message routing and distribution. The applications shouldn't need hard-coded destinations for messages or services. The ESB can help in two ways: by supporting virtualization (mapping logical destinations to real destinations) and by supporting event architectures, where the publisher doesn't need to know about the subscribers.

Management. The ESB should provide a common set of management capabilities that yield a common view of all services and endpoints.

Excellent support for the Web architecture. The ESB should encourage good use of HTTP and the Web.

XML performance. If the ESB is going to help manage and route XML messages, then it must do so with a minimum of overhead. It has to be much more scalable than the applications to which it is talking. Fundamentally this promotes two key technical requirements: nonblocking I/O and Streaming XML.

Security control. Managing distributed security is a problem in SOA, and augmenting application security with a set of central security controls is essential in an enterprise infrastructure.

All those features can be handled in either a distributed or centralized fashion.

It's time to reclaim the idea of the ESB to what it should be—a distributed network of services universally accessible using standard protocols and welldefined interfaces.

Paul Fremantle is co-founder and CTO of WSO2, which makes open-source Web services middleware.



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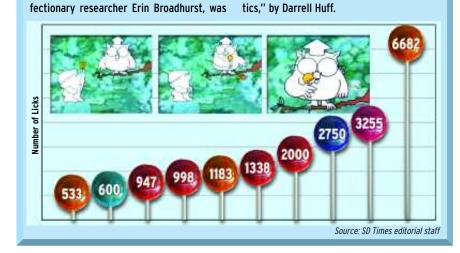
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SOA Watch

Are mashups SOA?

It does not take a rocket scientist to understand that mashups are moving from something conceptual and fun to productive and businesslike. In fact, developers are leveraging mashups to solve all sorts of business problems. The speed for production and the value of these little applications are compelling.

However, two factors must also be considered: the mixing and matching of resources found on the Web and/or within the enterprise and the true composite application, such as the one defined in SOA. Thus, mashups are indeed SOA, and SOA includes mashups.

While the concept of mashups is still developing, clearly the solution patterns are becoming more sophisticated, as they now combine the up-and-coming concepts behind SOA. To that end, two types of mashups are surfacing: visual and non-visual.

Visual mashups are familiar to us, as we mash Google Maps with a sex offender database or a real-time stock ticker with a portfolio manager. The value is there; take two resources and create something more useful than the applications would offer separately. It's kind of a 1+1=3 thing.

Visual mashups provide the ability to change the manner in which a visual interface behaves by mashing it up with other content or services.

While visual mashups are typically Web-site-to-Web-site, we are seeing more of the Web-site-to-enterprise (SOA) variety these days. Examples would include a mashup of Google Earth with your sales figures or your sales figures with your logistics system.

Non-visual mashups involve the mashing up of two or more services to create a combined application, or integration point to service a business process. What's unique is that they may not externalize anything to a user interface. In essence, they operate behind the scenes, but they are mashups nonetheless.

Non-visual mashups are the mashing up of two or more services that create a composite and do not leverage a user interface or other visual properties.

Examples would include mashing up a stream of customer addresses with an address validation service, or mashing up a stream of social security numbers with a credit check service. Each non-visual mashup perhaps is sending exceptions off to another stream or queue for processing later, or maybe to other mashups. This is simple, and I bet you can think of even more complex and

valuable non-visual mashups for your own enterprise using your SOA services, externally hosted services, or a combination of the two.

MASH-ATECTURE?

Thus, when talking about mashups in the context of architecture, you're typi-

cally discussing SOA. In fact, mashups are one of the most successful aspects of SOA. The use of mashups is exploding now, offering the best proof point of SOA. However, some people are resisting that relationship.

If you're talking about Webby applications, then perhaps WOA, or Web-oriented architecture, is a bet-

ter term. It doesn't matter to me, as long as we're discussing the use of Web-based and enterprise-based resources and services that are knitted together to form a solution. Or, more important, we're talking about resources and services that provide the ability to re-create the solution (the composite) without a lot of latency—in essence, adding the notion of agility, a core benefit of SOA.

Most who build mashups don't think of it as SOA. However, the core notions of SOA and WOA are clearly working when considering mashups. I view mashups as a mechanism that proves the SOA concept. As time goes on, the concept of mashups will morph into traditional development and become part of the architecture.

While mashups are indeed an innovative way to build cool applications from many available resources, both visual and non-visual, they are still composite applications. While I'm seeing mashups that are completely Webhosted, I'm seeing more and more that are a mix of Web and enterprise resources, as well as those that are true "enterprise mashups."

While mashups did not emerge from the core concepts of SOA, they indeed provide some core SOA mechanisms, including:

- The ability to place volatility into a single domain, thus allowing for changes and for agility.
- The ability to leverage services, both for information and behavior.
- The ability to bind together many back-end systems, making new and innovative uses of those systems.

This, however, does not mean that mashups are not innovative; clearly they are. Moreover, it does not mean that mashups are not extensions of the core notion of SOA. Remember, SOA is not a term, but rather an architecture pattern.

Reach analyst David S. Linthicum at david@linthicumgroup.com.

Rx for unit testing: Use with moderation

of all the good things the agile revolution has brought to software development, the most important is unit testing. Developers who become testenamored generally report immediate benefits:

- Code is better written. When made as testable as possible, code generally becomes more reliable and easier to read.
- Less time is spent debugging because code can be tested as it's written. So, there are no nasty surprises later. Rather, large sets of changes can be made with confidence that they will work, not with a sense of trepidation.
- Managers have a truer sense of a project's development timeline. In the old days, if the schedule called for six weeks of coding and three weeks of testing and debugging, you had no way of knowing how much more testing and recoding were in store after coding had been completed.

However, unit testing gives you confidence that there will be few surprises after the initial coding period. Sure, there will probably be some modifications, but not the type of vast rewriting that reverberates through many other modules and functions. In sum, you get

better code and a diminished need to debug. Ultimately, you have a good sense of where you are in relation to timelines and project delivery from a practice that does not cost much in time.

You would think that a technique that delivers so much and that has excellent

free tools to support it would be widely embraced. And, in fact, that's what I thought—until a few weeks ago. But several data points now raise concerns. The first came from Ivan Moore, the author of Jester, a tool I covered in my column titled "Integrate, then mutilate, your code" (June 15, 2007, page 37). Jester examines your code and, through

various tricks, tries to determine if you've overlooked a test that could be important. When I met Moore at the CitCon conference last year, he told me he had discontinued work on Jester, because the number of sites that really cared about the qualitative extent of their unit tests was so small that there was virtually no point refining the product for their use.

Then came the news that tool vendor Agitar, whose entire fate hinged on the

adoption of unit testing, was closing down. The company had excellent products for unit testing and even offered a free service that would generate unit tests for your code. Despite great tools and free services and a dynamic advocate in founder Alberto Savoia, Agitar

> folded because, according to CEO Jerry Rudisin, "the market we served was just not big enough."

So neither a single paying business with no direct competition nor a freeware tool could attract enough support to keep going. That's disappointing. But other factors were also at work: Established Java developers were

discouraging or complaining about unit tests. For example, Cay Horstmann, a professor at San Jose State University and a co-author of the excellent two-volume Java tutorial "Core Java," said recently that he does not unit-test much. Because many others don't either, he observed, "If so many experienced developers don't write unit tests, what does that say?" My question is that if you tie in the failure rate of projects done by those developers and then ask the ques-

tion, what does it say? I was surprised to see anyone argue against more testing of code.

Part of the problem might be the perception that writing unit tests steals time from coding. Consider, for example, this comment from Howard Lewis Ship, the highly regarded founder of the Tapestry Web framework: "I'm losing some faith in unit testing, or at least busywork unit testing relative to integration testing." He goes on to state that he still believes in unit testing, but he would like to limit what he writes tests for.

There is no doubt that unit testing can be overdone. Some mistaken aficionados feel it's imperative to test 100% of code. (No major proponent of unit testing agrees with that view.) And the test-driven development folks also may contribute to the confusion about what to test by insisting that everything be tested even before code is written.

Naturally, there needs to be sensible moderation. But it's crucial to understand that time spent writing tests does not generally extend a project; rather, that time is recouped from the testing and debugging phases. Managers and developers who understand that will be richly rewarded.

Andrew Binstock is the principal analyst at Pacific Data Works. Read his blog at binstock.blogspot.com.



SHORT TAKES

TODAY, ITUNES KNOWS YOUR



favorite music, TiVo your favorite television shows and Open-Table your favorite restaurants. When are all

these services going to get together and give you the kind of Internet that you, and only you, like?

The idea of an "Implicit Internet" was one of the technology trends debated by venture capitalists at a Churchill Club forum on May 14 in San Jose. Josh Kopelman, managing partner at First Round Capital, argued that "the silos are coming down" and that sharing the information accumulated by iTunes, TiVo or Google would sharpen preferences for Web users and enhance the advertising model for the Web.

Roger McNamee, co-founder of Elevation Partners, warned that the security issues are "profound" and that a privacy breach would discredit the advertising model and "reset the Internet economy." But Vinod Khosla of Khosla Ventures scoffed at the security worries. He needs an assistant to sort his e-mail, and he said that the "data reduction" benefit of an Internet that knows what he wants would be worth any privacy trade-off.

— Robert Mullins

THE GOOGLE I/O DEVELOPER con-

ference, held at the end of May in San Francisco, was medium-interesting. There were solid technical classes on App Engine and neat demonstrations of the Android mobile-phone software stack. There were lots of discussions about social networks and the virtuous cycle among compelling new applications, new users and advertising, which in turn funds new applications.

What was missing from Google I/O was a compelling vision beyond "more of the same." I came away informed, but not inspired, by Google's three-fold mission: to make the cloud more accessible, keep connectivity pervasive and make the client more powerful. In all of these, Google is evolutionary, not revolutionary.

That's not to discount the impact that Google's entry into cloud computing will



have. At the conference, Google unleashed tiger, making its App Engine generally available to

its customers. The pricing model—free for as many as 5 million page views per month—is compelling for those wanting to try out ideas. The technology appears solid. The APIs are very approachable. And, as with Amazon's programmable platform, anyone can use the applications that you build. (Salesforce.com's hosting model is geared toward providing third-party applications for their paying CRM customers.)

Google's App Engine is going to get traffic; of that there's no doubt. That is going to be a catalyst for seriously considering the cloud as a deployment platform for enterprise applications of all kinds. Even when a company has a fullfeatured Internet data center, some apps may lend themselves better to Google's hosted platform. Thanks to Amazon and Google, the cloud is now a genuine platform that bears serious consideration for — Alan Zeichick new projects.

IT'S BECOMING CLEAR THAT the phone-as-a-platform model is taking off, with word from Google that Androidbased phones could be out by the end of this year. It may well be that in a couple of years, the market for mobile devices becomes pretty much a three-way horserace, with Apple's iPhone duking it

out with Android and Windows Mobile holding its own. The big losers are likely to be those companies and customers that have pinned their hopes on Symbian, which lacks the "instant community" that a platform backed by Apple or Google seems to attract. Even adopting Linux as a core plat-

form may not be enough to save the day for the likes of Motorola and Palm.

— P.J. Connolly

AT THE WALL STREET JOURNAL'S

sixth D: All Things Digital conference in Carlsbad, Calif., on May 27, outgoing Microsoft chairman Bill Gates and CEO Steve Ballmer showed off a new touch-



screen interface that they said would make its debut in Windows 7. Microsoft intends to deliver the technology in

Windows notebooks, in all-in-one PCs and in external monitors.

Windows 7's "multi-touch" capabilities are derived from Microsoft's Surface prototype—a tabletop interface that is best suited for kiosks and bars. Portable devices like the iPhone doubtlessly benefit from "touch," but would a desktop PC? Call me a curmudgeon, I'm not convinced that Microsoft is not just overreaching again (think Tablet PC).

I hope for its sake that Windows 7 has more viable selling points.

- David Worthington

EVENTS CALENDAR

eBay Developers Conference

June 16-18

Chicago

EBAY pages.ebay.com/devcon

USENIX 2008

June 22-27

Boston

www.usenix.org/events/usenix08

Software Industry Conference

July 17-19

July 21-24

SHAREWARE INDUSTRY AWARDS FOUNDATION

Dr. Dobbs Architecture & Design World

Chicago

THINKSERVICES drdobbsarchworld.com

Open Source Convention July 21–25 Portland, Oregon

O'REILLY MEDIA

www.conferences.oreilly.com/oscon

Entity Data Management July 22-23

FIMA

www.wbresearch.com/fimaedm

Black Hat USA Las Vegas

August 2-7

August 4-7

August 4-8

August 4-8

August 10-15

TECHWEB

www.blackhat.com

LinuxWorld Conference & Expo

San Francisco **IDG WORLD EXPO** www.linuxworldexpo.com

Agile 2008

Toronto AGILE ALLIANCE

agile2008.org

ESRI International

User Conference

San Diego

ESRI

www.esri.com/events/uc

SHARE 2008

San Jose

SHARE

www.share.org

ACM SIGGRAPH

August 11-15

Los Angeles ACM SIGGRAPG

www.siggraph.org/events/s2008

Intel Developer Forum August 19-21

San Francisco

www.intel.com/idf/index.htm

Software Test & September 24-26 **Performance Conference**

Boston

BZ MEDIA

www.stpcon.com

EclipseWorld 2008 Reston, Va.

October 28-30

BZ MEDIA

www.eclipseworld.net

For a more complete calendar of U.S. software development events, see www.bzmedia.com/calendar Information is subject to change. Send news about upcoming events to events@bzmedia.com.

BUSINESS BRIEFS

Coverity plans to acquire Codefast, a provider of object-oriented build automation and management products, Coverity said. The deal would mark Coverity's first acquisition, and company executives said Codefast's PerfectBuild product would be enhanced because it could work with Coverity's Software DNA Map analysis system ... VMware reached a definitive agreement to acquire Bhive Networks, an application performance management software company in San Mateo. Calif. VMware executives said the combination would offer performance management and service-level reporting for applications running within VMware virtual machines on servers and desktops . . . Automated testing solutions provider Green Hat intends to acquire Solstice Software, which makes SOA testing products, Green Hat said, London-based Green Hat said the deal would help the company's expansion into North America and create one of the largest specialist SOA testing companies in the world . . . Blackbaud, a Charleston, S.C.-based supplier of software for nonprofit and government organizations, said it will spend US\$46 million to acquire Kintera, a San Diego-based company that also builds software for nonprofit organizations. Blackbaud executives said the purchase would help expand the

company's offerings online and in other areas, since the two companies had served different market segments.

EARNINGS: NetApp announced revenue of US\$938 million in the fourth guarter of fiscal year 2008, an increase of 17% from \$801 million for the year-earlier quarter. Net income for the quarter was \$90 million, flat from the \$90 million reported the year before. Revenue for the fiscal year totaled \$3.3 billion, up from \$2.8 billion for fiscal 2007 ... Salesforce.com reported revenue of US\$247.6 million for its fiscal first quarter ending April 30, a jump of 52% from the year-ago period. Subscription and support revenue totaled \$225.3 million, an increase of 53% from the year before, and professional services revenue was \$22.3 million, a 51% jump from the previous year . . . **Dell** had fiscal first-guarter revenue of US\$16.08 billion, up 9% from the same quarter a year earlier. Net income was \$785 million, a 4% rise from \$756 million the year before ... Magic Software, a provider of application development and deployment products, had first-quarter revenue of US\$15.1 million, a 9% jump from \$13.8 million for the year-ago quarter. Net profit was \$52,000, down from \$1 million the year before. ■

INTRODUCING THE



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